

CAST-IRON PIPE AND FITTINGS

[A preliminary report for this industry was issued under date of June 25, 1932]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of cast-iron pipe and fittings for gas, water, sewage, etc. It has little relation to the manufacture of wrought-iron and steel pipe.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1909 TO 1931, AND FOR STATES 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy ¹	Value of products ²	Value added by manufacture ³
<i>United States</i>						
1931-----	78	16,066	\$14,558,947	\$20,977,433	\$47,937,502	\$26,960,069
1929-----	72	19,741	22,551,778	34,289,365	80,260,550	45,971,185
1927-----	82	22,892	25,982,196	43,224,970	95,088,622	46,863,652
1925-----	77	23,033	27,438,033	48,845,592	100,919,173	52,072,581
1923-----	73	21,576	25,019,953	48,804,425	92,674,088	43,809,663
1921-----	70	12,496	13,135,992	23,897,020	44,321,548	20,424,528
1919-----	59	12,625	14,705,398	25,386,552	50,235,101	24,848,549
1914-----	58	12,557	7,075,976	10,930,141	26,659,365	9,729,224
1909 ⁴ -----	52	12,228	6,502,338	18,884,342	29,153,723	10,269,381
Percent of increase or decrease (—):						
1929-31-----	(9)	-18.6	-35.4	-38.8	-40.3	-41.4
1927-29-----	(9)	-13.8	-13.2	-28.9	-15.6	-1.9
1925-27-----	(9)	-6	-5.3	-1.3	-5.8	-10.0
1923-25-----	(9)	6.8	9.7	1	8.0	18.7
1921-23-----	(9)	72.7	90.5	104.2	109.1	114.8
1919-21-----	(9)	-1.0	-10.7	-5.9	-11.8	-17.8
1921-31-----	(9)	28.6	10.8	-12.2	8.2	32.0
1919-29-----	(9)	56.4	53.4	35.1	59.8	85.0
1909-19-----	(9)	3.2	126.2	34.4	72.3	142.0
<i>States, 1931</i>						
Alabama-----	28	7,132	\$5,750,295	\$8,411,308	\$20,819,631	\$12,408,323
California-----	4	173	181,516	197,499	571,394	373,895
New Jersey-----	9	3,197	3,532,420	5,435,038	10,918,333	5,483,295
New York-----	6	293	314,076	344,080	914,980	570,900
Pennsylvania-----	9	1,076	1,053,887	1,331,768	3,136,298	1,804,530
Tennessee-----	5	975	817,893	1,071,153	2,540,875	1,469,722
Other States ⁵ -----	17	3,220	2,908,860	4,186,587	9,035,991	4,849,404

¹ Includes cost of foundry supplies for all years except 1929; the schedule for 1929 directed manufacturers to omit this item.

² For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

³ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

⁴ No comparable data for years prior to 1909.

⁵ Percent not computed where base is less than 100.

⁶ Colorado, 1 establishment; Georgia, 1; Maryland, 3; Massachusetts, 1; North Carolina, 1; Ohio, 5; Rhode Island, 1; Utah, 1; Virginia, 3.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND BY STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	16,066	16,489	16,657	17,353	17,153	17,304	16,530	16,150	15,659	15,197	15,164	14,791	14,841
1929.....	19,741	19,317	20,147	19,854	19,995	20,372	20,462	20,604	20,871	20,630	19,337	17,967	17,344
1925.....	23,033	23,139	23,362	23,609	23,242	23,117	23,239	22,831	22,849	22,885	22,710	22,576	22,853
1919.....	12,625	10,615	9,924	9,753	10,529	11,268	11,482	13,006	13,781	14,625	15,478	15,454	16,085
1914.....	12,557	11,816	12,572	13,193	12,701	12,613	12,849	13,221	13,427	13,211	12,555	11,330	11,160
<i>States, 1931</i>													
Alabama.....	7,132	7,233	7,430	7,747	7,616	7,788	7,401	7,129	6,815	6,634	6,834	6,510	6,454
California.....	173	184	187	187	185	185	190	175	159	150	151	150	157
New Jersey.....	3,197	3,073	3,018	3,410	3,448	3,402	3,372	3,289	3,177	3,090	3,067	3,047	3,003
New York.....	293	298	367	344	285	282	280	285	284	283	277	282	242
Pennsylvania.....	1,076	1,360	1,086	1,104	1,116	1,123	1,058	1,064	1,050	1,014	996	977	962
Tennessee.....	975	989	1,062	1,058	1,017	1,016	988	981	954	982	900	923	886

TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931 AND 1929

[The figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 16, p. 9]

CLASS	1931		1929	
	Tons (2,000 pounds)	Value	Tons (2,000 pounds)	Value
1. Cast-iron Pipe and Fittings industry, all products, total value.....		\$47,937,502		\$80,200,550
2. Cast-iron pipe and fittings.....				
3. Other products, including castings, (not normally belonging to the industry).....		44,836,318		74,615,420
4. Cast-iron pipe and fittings made as secondary products in other industries.....		3,101,184		5,645,130
		6,274,497		11,274,060
Cast-iron pipe and fittings, all industries: Aggregate value (sum of 2 and 4).....		51,110,815		85,800,080
Quantity reported ¹	1,191,082	45,238,012	1,736,207	78,206,376
Quantity not reported.....		5,872,803		7,593,711
Bell and spigot pipe.....	867,887	27,576,243	1,222,095	44,706,617
Flanged pipe.....	9,733	601,165	22,473	1,183,873
Culvert pipe.....	18,090	783,203	21,391	1,108,860
Soil and plumbers' pipe and fittings.....	236,998	10,925,487	357,626	18,762,840
Cast-iron pipe fittings, total ²		11,224,717		20,127,088
Gas and water pipe fittings, separately reported: Quantity reported.....	37,448	3,397,691	112,022	12,534,277
Quantity not reported.....		743,464		
Other cast-iron fittings and cast-iron fittings not reported as to kind: Quantity reported.....	20,926	1,954,223		
Quantity not reported.....		5,124,339		

¹ Includes following amounts reported as cast by the centrifugal process: 1931, 340,113 tons; 1929, 334,070 tons.

² For total production of all classes of metal fittings, see report for Foundry and Machine-Shop Products Not Elsewhere Classified.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, BY STATES: 1931

[Some of the "Other States," however, reported larger quantities and values of specified classes of products than some of the States shown separately]

KIND AND STATE	Number of establishments	Tons (2,000 pounds)	Value
Cast-iron pipe and fittings, aggregate value.....			\$51, 110, 815
Bell and spigot pipe, total.....	24	867, 887	27, 576, 243
Alabama.....	8	411, 812	12, 446, 025
New Jersey.....	3	233, 886	7, 616, 218
Other States.....	13	222, 189	7, 514, 000
Culvert pipe ¹	5	18, 090	783, 203
Flanged pipe ¹	14	9, 733	601, 165
Soil and plumbers' pipe and fittings, total.....	50	236, 998	10, 925, 487
Alabama.....	17	101, 187	4, 477, 473
New Jersey.....	6	21, 837	1, 397, 314
New York.....	5	16, 979	844, 282
Pennsylvania.....	8	37, 318	1, 780, 184
Tennessee.....	4	19, 281	744, 204
Other States.....	10	40, 366	1, 682, 030
Cast-iron pipe fittings, total.....	85		11, 224, 717
Alabama.....	12		1, 954, 934
California.....	5		234, 842
Illinois.....	9		2, 435, 745
New Jersey.....	7		1, 239, 666
New York.....	10		509, 413
Ohio.....	8		1, 426, 323
Pennsylvania.....	9		1, 369, 369
Other States.....	25		2, 054, 425

¹ State figures withheld to avoid disclosing approximations of data for individual establishments.

CUTLERY (NOT INCLUDING SILVER AND PLATED CUTLERY) AND EDGE TOOLS

[A preliminary report for this industry was issued under date of Sept. 7, 1932]

Description of the industry.—The establishments in this industry are engaged primarily in the manufacture of various kinds of cutting implements, which are divided, for census purposes, into two groups, namely, "cutlery (not including silver and plated cutlery)" and "edge tools." The cutting edge is used in so many forms that it is impracticable to collect data in detail except for the major classes. The most important of these are razors and razor blades; table and kitchen cutlery; pocket knives; scissors and shears; axes, adzes, and hatchets; chisels; augers and bits; and cutting dies.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy ¹	Value of products ²	Value added by manufacture ³
<i>United States</i>						
1931.....	221	12,485	\$12,194,016	\$8,983,219	\$52,336,936	\$43,353,717
1929.....	239	14,991	17,651,292	14,789,335	78,690,572	63,871,537
1927.....	230	15,832	18,892,154	18,180,385	76,688,444	68,508,099
1925.....	211	16,407	20,226,033	20,562,009	80,263,252	69,701,243
1923.....	211	16,671	19,750,933	17,159,825	72,477,013	55,317,138
1921.....	210	14,345	14,749,993	14,973,967	49,341,204	34,367,237
1919.....	304	19,859	20,048,465	19,477,437	66,629,570	47,152,133
1914.....	252	16,501	9,075,896	8,185,699	25,540,987	17,355,288
1909.....	281	16,997	8,555,891	7,230,508	22,884,914	15,654,406
1904.....	254	14,545	7,076,018	6,028,166	18,614,929	12,586,763
1899.....	275	12,028	5,652,242	5,091,114	14,787,355	9,696,241
Percent of increase or decrease (-):						
1929-31.....	-7.5	-16.7	-30.9	-39.3	-33.5	-32.1
1927-29.....	3.9	-5.3	-6.6	-18.7	2.6	9.2
1925-27.....	9.0	-3.5	-6.6	-11.6	-4.5	-2.0
1923-25.....	-1.6	2.4	19.8	14.6	10.7	7.9
1921-23.....	0.5	16.2	33.9	14.6	46.9	61.0
1919-21.....	-30.9	-27.8	-26.4	-23.1	-25.0	-27.1
1921-31.....	5.2	-13.0	-17.3	-40.0	6.1	26.1
1919-29.....	-21.4	-24.5	-12.0	-24.1	18.1	35.5
1909-19.....	8.2	16.8	134.3	169.4	191.2	201.2
1899-1909.....	2.2	41.3	51.4	42.0	54.8	61.4
<i>States, 1931</i>						
California.....	6	21	\$34,782	\$14,234	\$69,497	\$55,283
Connecticut.....	25	2,617	2,149,133	1,501,028	5,804,817	4,303,789
Illinois.....	17	324	401,419	307,794	1,248,147	941,353
Massachusetts.....	41	2,131	2,244,603	1,529,930	15,270,949	13,741,019
Michigan.....	4	79	88,035	36,919	209,648	172,729
Missouri.....	12	576	754,236	362,442	1,869,085	1,506,643
New Hampshire.....	3	90	100,887	68,843	260,012	191,169
New Jersey.....	22	1,313	1,400,000	1,144,393	10,378,177	9,233,784
New York.....	38	2,771	2,932,094	2,373,254	11,587,717	9,214,463
Ohio.....	12	731	582,417	407,372	1,673,966	1,266,594
Pennsylvania.....	16	380	395,936	307,748	990,438	682,690
Other States ⁴	25	1,452	1,110,465	929,262	2,973,483	2,044,221

¹ Includes cost of mill supplies for 1927 and earlier years but not for 1929 and 1931.

² For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

³ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

⁴ Arkansas, 1 establishment; Colorado, 1; Indiana, 2; Kentucky, 1; Maine, 2; Maryland, 2; Minnesota, 1; Rhode Island, 3; Tennessee, 1; Vermont, 1; Washington, 2; West Virginia, 1; Wisconsin, 7.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	12, 485	12, 802	13, 450	13, 591	13, 277	13, 431	13, 309	12, 093	11, 966	11, 727	11, 482	11, 444	11, 249
1929.....	14, 991	14, 985	15, 115	15, 244	14, 972	14, 638	14, 568	14, 425	14, 789	15, 215	15, 466	15, 494	14, 977
1925.....	16, 407	15, 820	16, 345	16, 877	16, 843	16, 466	16, 228	15, 730	15, 182	15, 998	16, 912	17, 169	17, 315
1919.....	19, 859	18, 860	19, 565	19, 644	19, 272	19, 636	19, 453	19, 497	19, 097	19, 903	20, 842	21, 087	21, 322
1914.....	16, 561	17, 005	17, 437	17, 326	17, 108	16, 962	16, 807	15, 355	16, 425	16, 112	16, 277	16, 084	15, 794
<i>States, 1931</i>													
California.....	21	23	23	24	22	25	24	22	16	13	19	19	10
Connecticut.....	2, 617	2, 758	2, 769	2, 843	2, 832	2, 634	2, 583	2, 501	2, 491	2, 476	2, 511	2, 524	2, 488
Illinois.....	324	321	335	326	333	312	315	319	325	328	325	321	323
Massachusetts.....	2, 131	2, 037	2, 468	2, 495	2, 530	2, 913	2, 709	2, 140	1, 717	1, 560	1, 651	1, 663	1, 692
Michigan.....	79	79	80	82	78	75	78	70	79	82	83	84	82
Missouri.....	576	594	580	590	578	604	584	578	555	542	561	565	576
New Hampshire.....	90	92	91	102	94	95	90	90	89	91	92	80	76
New Jersey.....	1, 313	1, 324	1, 385	1, 389	1, 290	1, 361	1, 384	1, 313	1, 356	1, 356	1, 349	1, 171	1, 067
New York.....	2, 771	2, 991	3, 033	3, 041	2, 841	2, 774	2, 869	2, 657	2, 781	2, 747	2, 538	2, 584	2, 462
Ohio.....	731	637	751	743	759	758	753	653	738	741	749	752	740
Pennsylvania.....	380	412	357	370	389	392	371	260	384	396	398	417	414

1 No comparable statistics for years prior to 1914.

TABLE 3.—PRODUCTS, BY KIND AND VALUE: 1931 AND 1929

[The figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers]

KIND	1931	1929
1. "Cutlery (Not Including Silver and Plated Cutlery) and Edge Tools" in industry, all products, total value.....	\$52,336,936	\$78,660,872
2. Cutlery and edge tools.....	\$50,598,354	\$75,522,532
3. Other products (not normally belonging to the industry).....	\$1,444,603	\$2,917,971
4. Receipts for repair work.....	\$293,979	\$220,369
5. Cutlery and edge tools made as secondary products in other industries, value.....	\$1,931,502	\$5,789,948
Cutlery and edge tools, all industries, total value (sum of 2 and 5).....	\$52,529,856	\$81,312,480
Cutlery:		
Table cutlery (not including silver and plated cutlery) and kitchen cutlery.....	\$3,855,193	\$7,776,263
Agricultural cutlery (grass hooks, corn knives, bush hooks, hay knives, and similar tools).....	\$871,948	(1)
Scissors, shears, and snips, total value.....	\$3,433,827	\$4,662,730
Tailors', barbers', household, etc.....	\$2,451,492	(2)
Other (grass, hedge, pruning, sheep, tinners', etc.).....	\$982,335	(3)
Clippers (barbers' or toilet and animal), total value.....	\$314,218	(1)
Razors and razor blades, total value.....	\$29,880,304	\$42,195,099
Safety razors:		
Number.....	13,537,002	(1)
Value.....	\$1,808,756	\$1,823,657
Safety-razor blades:		
Number.....	707,980,215	(1)
Value.....	\$27,906,266	\$30,967,357
Other razors:		
Number.....	170,211	(1)
Value.....	\$114,282	\$404,085
Pocket knives, value.....	\$3,732,003	\$5,333,133
Butcher knives, value.....	\$726,519	(1)
Clavers, value.....	\$79,410	(1)
Other cutlery, and cutlery not reported by kind, value.....	\$1,240,000	\$5,030,910
Edge tools:		
Axes, adzes, and hatchets, value.....	\$2,217,321	\$5,105,470
Augers and bits, gimlets, and countersinks (woodworking only), value.....	\$943,058	\$2,223,844
Chisels (except cold chisels) and gouges, value.....	\$302,243	\$390,110
Cutting dies, for use in cutting cloth, paper, leather, etc. (not including metal-cutting dies), value.....	\$3,363,447	\$3,981,074
Machine knives (except agricultural and metal-working), value.....	\$505,377	(1)
Other edge tools, not reported by kind, value.....	\$1,055,388	\$4,107,838

1 No comparable data.

2 Revised; estimated in part.

3 Not called for separately on schedule.

4 Value of hunting, sheath, and other knives, manicure cutlery, etc.

5 Includes value of knives for use in machines, other than agricultural, artisans' knives, barber and animal clippers, and knives not reported by kind.

6 Chisels only. Value of gouges included in that of "Other edge tools."

7 Includes value of drawknives, spoke-shaves, planes, and other woodworking edge tools not reported by kind.

8 Includes value of machetes, picks, mattocks, planes, gouges, and woodworking tools not reported by kind.

DOORS, SHUTTERS, AND WINDOW SASH AND FRAMES, MOLDING, AND TRIM, METAL

[A preliminary report for this industry was issued under date of Nov. 22, 1932]

Description of the industry.—The establishments covered by this industry designation are engaged wholly or principally in the manufacture of hollow-metal and solid-metal doors, window sash, and window and door frames; hollow-metal molding, and trim; and metal-covered fire retardant doors, window sash, and door and window frames. The manufacture of elevator doors is not, however, included in this industry but is classified under "Structural and Ornamental Metal Work, Not Made in Plants Operated in Connection with Rolling Mills."

Detailed statistics of products.—A special schedule calling for detailed data on the several classes of products manufactured in this industry was used for the first time at the census for 1929. For this reason no comparable statistics for earlier years can be given in table 3.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States," namely, Pennsylvania, is, however, more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931	139	6,816	\$8,897,727	\$14,572,103	\$35,608,399	\$21,036,296
1929	148	9,557	17,065,422	30,178,161	72,160,388	41,982,227
1927	117	8,050	15,564,458	25,602,238	65,279,973	39,677,735
1925	92	6,791	12,899,071	21,627,746	50,078,034	28,450,288
1923	37	2,429	4,332,767	5,604,210	15,367,111	9,782,901
1921	45	1,782	2,880,909	4,289,274	12,466,701	8,177,427
1919	57	2,077	2,729,774	4,577,934	10,877,001	6,299,067
1914	43	1,985	1,537,638	1,995,885	5,183,602	3,187,717
1909	29	1,601	874,340	1,282,905	3,005,695	1,722,780
1904	24	999	407,890	601,754	1,477,235	875,481
1899	13	117	85,683	115,718	319,629	203,911
Percent of increase or decrease (—):						
1929-31	-6.1	-28.7	-47.9	-51.7	-50.7	-49.9
1927-29	26.5	18.7	9.6	17.9	10.5	5.8
1925-27	(8)	18.5	20.7	18.4	30.4	39.5
1923-25	(8)	179.6	197.7	285.9	225.9	191.4
1921-23	(8)	36.3	50.4	30.7	23.3	19.4
1919-21	(2)	-14.2	5.5	-6.3	14.6	29.8
1921-31	(3)	282.5	208.9	239.7	185.6	167.2
1919-29	(2)	360.1	525.2	559.2	563.4	559.5
1909-19	(8)	29.7	212.2	256.8	261.9	265.6
1899-1909	(2)	1,268.4	920.4	1,008.6	840.4	744.9
<i>States, 1931</i>						
California	13	364	\$518,179	\$861,702	\$1,775,045	\$913,343
Illinois	12	162	238,448	418,668	828,322	409,654
Indiana	6	784	827,777	1,005,020	2,848,099	1,843,079
Massachusetts	7	189	293,961	277,808	776,308	498,495
Michigan	7	825	1,048,923	1,823,574	4,402,703	2,579,129
Missouri	7	139	170,753	223,771	550,067	326,206
New Jersey	5	190	251,297	368,992	913,170	544,178
New York	55	2,156	3,115,710	3,843,518	11,907,650	8,064,132
Ohio	7	466	593,373	827,461	2,651,442	1,823,981
Other States ⁴	20	1,541	1,839,306	4,921,589	8,955,598	4,034,009

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.
² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Connecticut, 1 establishment; Iowa, 2; Kentucky, 1; Louisiana, 1; Maryland, 1; Minnesota, 2; Oregon, 1; Pennsylvania, 6; Tennessee, 1; Washington, 1; West Virginia, 1; Wisconsin, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931	6,816	7,263	7,038	6,976	6,817	6,849	6,780	6,911	6,783	6,660	6,682	6,498	6,540
1929	9,557	9,366	9,458	9,464	9,456	9,492	9,623	9,664	9,836	9,830	9,829	9,426	9,443
1925	6,791	6,410	6,335	6,492	6,529	6,740	6,899	7,019	6,908	7,040	7,089	7,063	6,966
1919	2,077	2,295	1,939	1,893	1,792	1,977	1,890	1,952	2,104	2,178	2,271	2,337	2,266
1914	1,985	1,946	2,028	1,921	1,980	1,944	1,817	1,857	1,859	1,957	2,139	2,240	2,132
1909	1,601	1,379	1,412	1,390	1,415	1,422	1,461	1,529	1,648	1,770	1,890	1,932	1,950
<i>States, 1931</i>													
California	364	377	369	378	358	371	383	403	390	379	346	310	309
Illinois	162	202	177	159	175	161	161	157	152	143	145	153	158
Indiana	784	819	798	801	766	681	721	850	818	793	787	703	810
Massachusetts	189	243	215	206	182	176	170	175	179	205	186	162	169
Michigan	325	755	814	830	820	850	850	840	856	821	793	808	814
Missouri	139	155	152	148	153	140	140	141	143	136	126	122	172
New Jersey	190	182	179	185	190	204	199	196	195	189	192	190	176
New York	2,156	2,436	2,376	2,345	2,328	2,320	2,204	2,157	2,083	1,986	1,931	1,855	1,854
Ohio	466	538	531	479	452	418	423	460	454	458	461	459	456

TABLE 3.—PRODUCTS, BY KIND AND VALUE: 1931 AND 1929

KIND	1931	1929
1. "Doors, Shutters, Window Sash and Frames, Molding, and Trim, Metal" industry, all products, total value	\$35,608,399	\$72,160,383
2. Metal doors, shutters, window sash and frames, molding, and trim	28,907,694	57,153,638
3. Other products (not normally belonging to the industry)	6,377,732	12,089,192
4. Receipts for custom and repair work	322,973	2,917,558
5. Metal doors, shutters, window sash and frames, molding, and trim made as secondary products in other industries, value	5,874,163	12,215,271
Metal doors, shutters, window sash and frames, molding, and trim made in all industries:		
Aggregate value (sum of 2 and 5)	34,781,857	69,368,069
Solid metal doors, shutters, etc., total value	16,687,141	42,437,957
Doors	3,367,960	(1)
Shutters	89,065	
Window sash	12,185,005	
Window and door frames	628,700	
Molding and trim	406,411	
Hollow-metal doors, window sash, etc., total value	13,268,044	17,717,034
Doors	5,845,468	(1)
Window sash and window and door frames	6,767,384	
Molding and trim	825,192	
Metal-covered doors, window sash, etc., total value	4,780,617	
Doors	3,864,867	
Window sash	221,104	
Window and door frames	499,117	
Molding and trim	195,529	
Doors, shutters, etc., not distributed by kind, value	46,055	1,450,924

¹ Not called for separately on schedule.

² The schedule called for separate data for window sash and for window and door frames, but some of the manufacturers reported these products in combination.

FILES

[A preliminary report for this industry was issued under date of Sept. 15, 1932]

Description of the industry.—The establishments in this industry are engaged primarily in manufacturing files and rasps and in recutting files. Their products comprise not only files and rasps for the use of machinists, blacksmiths, cabinetmakers, etc., but also small files for jewelers, dentists, and manicurists.

TABLE 1.—SUMMARY: 1899 to 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4]

	Number of establish- ments	Wage earn- ers (average for the year)	Wages	Cost of ma- terials, fuel, and pur- chased elec- tric energy ¹	Value of products ²	Value added by manufac- ture ³
<i>United States</i>						
1931.....	26	3,016	\$2,718,942	\$1,220,740	\$7,316,062	\$6,095,322
1929.....	33	3,974	5,239,808	3,052,075	14,114,378	11,061,703
1927.....	36	3,948	5,144,987	3,135,955	12,973,724	9,837,779
1925.....	38	4,209	5,393,274	3,517,726	13,540,953	10,023,227
1923.....	37	4,590	5,805,294	3,840,256	13,565,444	9,725,188
1921.....	39	3,595	3,174,612	2,309,087	7,647,252	5,338,165
1919.....	50	5,767	6,192,444	4,227,880	17,616,563	13,388,653
1914.....	48	4,349	2,135,436	1,595,225	5,608,157	4,012,932
1909.....	57	4,158	1,977,877	1,595,730	5,691,203	4,095,473
1904.....	62	3,276	1,514,412	1,310,978	4,391,745	3,080,767
1899.....	86	3,160	1,277,199	1,166,414	3,403,906	2,237,492
Percent of increase or decrease						
(-):						
1929-31.....	(5)	-24.1	-48.1	-60.0	-45.2	-44.9
1927-29.....	(5)	0.7	1.8	-2.7	8.8	12.4
1925-27.....	(5)	-6.2	-4.6	-10.9	-4.2	-1.9
1923-25.....	(5)	-8.3	-7.1	-8.4	-2	3.1
1921-23.....	(5)	27.7	82.9	66.3	77.4	82.2
1919-21.....	(5)	-37.7	-48.7	-45.4	-56.6	-60.1
1921-31.....	(5)	-16.1	-14.4	-47.1	-4.3	14.2
1919-29.....	(5)	-31.1	-15.4	-27.8	-19.9	-17.4
1909-19.....	(5)	83.7	213.1	164.9	209.5	226.9
1899-1909.....	(5)	31.6	54.9	36.8	67.2	83.0

¹ Includes cost of mill supplies for 1927 and earlier years but not for 1929.

² For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

³ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

⁴ Connecticut, 1 establishment; Illinois, 2; Indiana, 1; Iowa, 1; Massachusetts, 1; Michigan, 1; New Jersey, 5; New York, 2; Ohio, 5; Pennsylvania, 6; Rhode Island, 1. Because of the fact that the publication of statistics for the leading States would disclose, exactly or approximately, the data reported by individual establishments, no State figures are given in the report for this industry.

⁵ Percent not computed where base is less than 100.

TABLE 2.—WAGE EARNERS, BY MONTHS: 1931, 1929, 1925, 1919, 1914, AND 1909

[The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	3,016	3,198	3,189	3,164	3,122	3,084	3,019	2,935	2,940	2,928	2,904	2,863	<i>2,838</i>
1929.....	3,974	3,943	3,967	4,014	3,988	3,986	3,957	3,992	4,017	4,081	4,044	3,876	<i>3,815</i>
1925.....	4,209	4,277	4,299	4,349	4,283	4,205	4,120	4,079	4,095	4,149	4,166	4,235	<i>4,248</i>
1919.....	5,767	6,251	6,025	5,728	5,673	5,339	5,298	5,355	5,668	5,821	5,943	6,043	<i>6,165</i>
1914.....	4,349	4,510	4,538	4,539	4,481	4,475	4,410	4,432	4,400	4,204	4,164	4,020	<i>4,075</i>
1909.....	4,158	4,102	4,123	4,119	4,127	4,071	4,093	4,160	4,112	4,168	4,212	4,301	<i>4,329</i>

TABLE 3.—PRODUCTS, BY KIND, QUANTITY, AND VALUE: 1931, 1929, AND 1927

[The figures for 1931 and 1927 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 16, p. 9]

KIND	1931	1929	1927
1. Files industry, all products, total value.....	\$7,316,062	\$14,114,378	\$12,973,734
2. Files and rasps, value.....			
3. Other products (not normally belonging to the industry), value, and receipts for repair work.....	6,831,791	13,380,289	12,346,529
4. Files and rasps made as secondary products in other industries, value.....	484,271	734,089	627,205
Files and rasps, all industries: Total (sum of 2 and 4).....	125,564	229,103	120,290
Files and rasps, all industries: Total (sum of 2 and 4).....	\$6,957,355	\$13,609,392	\$12,475,828
Metal-working files and rasps: Dozens.....			
Value.....	5,091,079	8,247,179	(¹)
Woodworking files and rasps: Dozens.....	\$6,658,906	\$13,030,895	\$11,854,620
Value.....			
Other files and rasps, value.....	38,718	74,147	(¹)
	\$50,846	\$116,347	\$95,743
	\$247,603	\$462,150	\$525,465

¹ No data.

FIREARMS

Description of the industry.—The Firearms industry, according to the census classification, consists in the manufacture of unmounted firearms—weapons made to be fired from the hand or from the shoulder—and of their parts. Commercial manufacturers only are classified in this industry, no data having been collected from Government establishments.

Production statistics.—Data on the production of firearms by type of action were collected, but it was necessary to combine them for each class of firearms in order to avoid disclosing, exactly or approximately, the output of individual establishments.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for the States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States"—namely, New York—is, however, more important in the industry than Massachusetts]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	24	4, 264	\$4, 710, 580	\$2, 501, 397	\$10, 611, 146	³ \$8, 109, 749
1929.....	21	6, 838	9, 209, 551	4, 117, 099	21, 970, 367	17, 853, 268
1927.....	20	6, 130	7, 933, 639	5, 047, 555	19, 452, 372	14, 404, 817
1925.....	20	4, 470	5, 583, 907	3, 174, 446	15, 179, 303	12, 004, 917
1923.....	21	6, 204	7, 592, 695	3, 643, 914	17, 664, 549	14, 020, 635
1921.....	20	4, 726	5, 730, 487	2, 696, 085	12, 883, 842	10, 187, 757
1919.....	26	11, 287	13, 333, 495	7, 613, 784	30, 181, 370	22, 567, 586
1914.....	29	7, 064	5, 067, 053	2, 669, 618	10, 543, 753	7, 874, 135
1909.....	27	6, 002	3, 918, 652	1, 568, 734	8, 058, 499	6, 480, 765
1904.....	30	6, 224	3, 722, 850	1, 733, 012	8, 275, 690	6, 537, 548
1899.....	32	4, 482	2, 542, 366	1, 305, 421	5, 444, 659	4, 139, 238
Percent of increase or decrease (—):						
1929-31.....	(3)	-37.6	-48.9	-39.2	-51.7	-54.6
1927-29.....	(9)	11.5	16.1	-18.4	12.9	23.9
1925-27.....		37.1	42.1	59.0	28.2	20.0
1923-25.....	(9)	-27.9	-26.5	-12.9	-14.1	-14.4
1921-23.....	(9)	31.3	32.5	35.2	37.1	37.6
1919-21.....	(9)	-58.1	-57.0	-64.6	-57.3	-54.9
1921-31.....	(9)	-9.8	-17.8	-7.2	-17.6	-20.4
1919-29.....	(9)	-39.4	-30.9	-45.9	-27.2	-20.9
1909-19.....	(9)	88.1	240.3	385.3	274.5	247.7
1899-1909.....	(9)	33.9	54.1	20.2	48.0	56.8
<i>States, 1931</i>						
Connecticut.....	7	1, 085	\$2, 225, 945	\$1, 508, 103	\$6, 304, 378	\$4, 796, 275
Massachusetts.....	4	668	738, 848	328, 778	1, 554, 117	1, 225, 339
Other States ⁴	13	1, 611	1, 745, 787	664, 516	2, 752, 651	2, 088, 135

¹ For 1929, sales (shipments or deliveries) by manufacturers; for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ California, 2 establishments; Colorado, 1; Michigan, 2; Missouri, 1; New Jersey, 1; New York, 4; Pennsylvania, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	4, 264	4, 651	4, 603	4, 561	4, 609	4, 577	4, 412	4, 297	4, 210	4, 127	3, 918	3, 738	3, 461
1929.....	6, 838	6, 878	6, 991	7, 011	6, 997	6, 948	6, 809	6, 885	6, 844	6, 798	6, 728	6, 633	6, 477
1925.....	4, 470	4, 651	4, 709	4, 761	4, 742	4, 600	4, 505	4, 445	4, 011	4, 107	4, 184	4, 223	4, 091
1919.....	11, 287	13, 428	12, 369	11, 606	11, 022	10, 885	10, 545	10, 194	10, 083	10, 026	11, 284	11, 251	11, 251
1914.....	7, 064	7, 401	7, 437	7, 443	7, 343	7, 227	7, 018	6, 816	6, 742	6, 926	6, 879	6, 987	7, 549
<i>States, 1931</i>													
Connecticut.....	1, 985	1, 951	1, 995	2, 065	2, 110	2, 112	2, 061	1, 994	2, 006	1, 962	1, 929	1, 833	1, 808
Massachusetts.....	668	824	756	623	663	727	746	760	633	654	592	564	478

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE, FOR THE UNITED STATES: 1925 TO 1931

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for other years represent production. See sec. 16, p. 9]

	1931	1929	1927	1925
1. Firearms industry, all products, total value.....	\$10, 611, 146	\$21, 970, 367	\$19, 452, 372	\$15, 179, 303
2. Firearms and parts	\$7, 707, 649	\$17, 352, 916	\$16, 499, 157	\$14, 105, 977
3. Other products (not normally belonging to the industry).....	2, 570, 670	3, 553, 846	2, 273, 354	439, 008
4. Custom work and repairing.....	332, 827	1, 003, 605	679, 861	633, 418
5. Firearms and parts made as secondary products in other industries.....	97, 556	348, 532	300, 198	183, 338
Firearms and parts, all industries: Total value (sum of 2 and 5).....	\$7, 805, 205	\$17, 701, 448	\$16, 889, 355	\$14, 289, 315
Pistols and revolvers: ¹ Number.....	115, 437	224, 768	220, 058	282, 777
Value.....	\$1, 520, 896	\$2, 974, 994	\$2, 893, 052	\$3, 201, 861
Rifles: Total number.....	354, 542	457, 676	415, 621	323, 100
Total value.....	\$2, 334, 515	\$4, 572, 123	\$4, 436, 131	\$3, 050, 009
Repeating rifles: ¹ Number.....	109, 840	(?)	(?)	(?)
Value.....	\$1, 560, 508			
Single-shot rifles: Number.....	244, 702	(?)	(?)	(?)
Value.....	\$774, 007			
Shotguns, total: Number.....	197, 555	589, 271	622, 686	422, 962
Value.....	\$2, 938, 700	\$8, 865, 944	\$8, 422, 731	\$6, 717, 343
Single-barrel shotguns: Repeating: Number.....	64, 592	(?)	(?)	(?)
Value.....	\$1, 749, 784			
Single-shot: Number.....	93, 159	(?)	(?)	(?)
Value.....	\$500, 293			
Double-barrel shotguns: Number.....	39, 804	(?)	(?)	(?)
Value.....	\$688, 623			
Parts and accessories, value.....	² \$1, 011, 094	³ \$1, 288, 387	³ \$1, 136, 541	³ \$1, 254, 042

¹ Manufacturers reported by type of action, but figures have been combined to avoid disclosing approximations of the data for individual establishments.

² Not called for separately on schedule.

³ Includes value of a small quantity of ordnance and ordnance accessories made by commercial manufacturers. See "Description of the industry," p. 803.

FORGINGS, IRON AND STEEL, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH STEEL WORKS OR ROLLING MILLS

Description of the industry.—The forgings covered by this classification are those specifically reported as such and manufactured by establishments engaged primarily in the commercial production of forgings. The industry does not include the manufacture of forged products, such as tools, for which separate census classifications are provided, nor of forged parts made and installed by manufacturers of motor vehicles, railroad cars, machinery, etc. Iron and steel forgings are made to a large extent in other industries, but as the products of some of these industries are not classified as forgings, it is impossible to compile statistics showing the total production in all industries.

The phrase "not made in plants operated in connection with rolling mills" refers to production in plants operated entirely independently of rolling mills, although in some cases under the same ownership.

The industry classification "Horseshoes, Not Made in Rolling Mills" was discontinued after the census for 1927 and has since been treated as a part of the Forgings industry.

SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	202	9,971	\$11,443,854	\$22,656,979	\$47,699,672	\$25,042,693
1929.....	218	20,882	34,505,349	71,606,964	156,248,947	84,841,983
1927.....	219	15,594	23,539,551	52,101,995	105,035,719	52,033,724
1925.....	227	20,453	31,587,906	68,577,495	135,918,024	67,341,129
1923.....	244	27,723	40,539,328	93,590,828	180,824,712	87,234,184
1921.....	252	10,047	20,950,139	45,291,495	85,082,938	39,791,443
1919.....	261	29,135	40,602,802	83,561,111	177,119,105	93,657,991
1914.....	213	11,277	7,849,883	15,300,471	30,747,450	15,446,079
1909.....	191	8,461	5,109,459	10,595,705	21,308,016	10,712,311
1904.....	146	5,897	3,554,819	6,008,057	12,909,376	6,901,319
1899.....	97	4,919	2,676,860	5,423,567	10,936,061	5,512,491
Percent of Increase or decrease (-):						
1929-31.....	-7.3	-52.3	-66.8	-68.4	-69.5	-70.4
1927-29.....	-0.5	33.5	46.6	37.4	48.8	59.0
1925-27.....	-3.5	-23.0	-25.5	-24.0	-22.7	-21.4
1923-25.....	-7.0	-26.1	-22.1	-26.7	-24.8	-22.8
1921-23.....	-3.2	63.6	93.5	108.6	112.5	119.2
1919-21.....	-3.4	-41.8	-48.4	-45.8	-52.0	-57.5
1921-31.....	-19.8	-41.2	-45.4	-50.0	-43.9	-37.1
1919-29.....	-16.5	-23.3	-15.0	-14.3	-11.8	-9.5
1909-19.....	36.6	244.3	685.4	688.6	731.2	773.4
1899-1909.....	(?)	72.0	93.1	95.4	94.8	94.3
<i>States, 1931</i>						
California.....	8	97	\$114,115	\$278,148	\$606,793	\$328,648
Connecticut.....	9	188	218,160	404,017	865,145	461,128
Illinois.....	24	1,826	2,333,741	4,603,842	10,091,385	5,487,543
Indiana.....	8	820	998,590	2,023,637	3,370,516	1,840,879
Massachusetts.....	11	855	965,295	1,280,245	3,336,861	2,050,603
Michigan.....	19	890	1,095,117	2,285,512	4,869,302	2,583,790
New Jersey.....	11	352	457,956	857,620	1,786,940	920,311
New York.....	17	598	719,404	1,811,364	3,472,879	1,661,515
Ohio.....	37	2,281	2,411,237	4,495,465	10,181,103	5,685,638
Pennsylvania.....	33	1,407	1,437,124	2,783,848	5,674,888	2,891,010
Wisconsin.....	5	310	334,457	664,788	1,429,343	764,555
Other States.....	20	347	353,588	1,168,484	2,014,524	840,010

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Alabama, 3 establishments; Colorado, 2; Iowa, 1; Kentucky, 2; Maryland, 3; Minnesota, 1; Missouri, 2; Oregon, 1; Tennessee, 1; Virginia, 1; Washington, 3.

GALVANIZING AND OTHER COATING, NOT DONE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in coating sheets and formed products with zinc (galvanizing or sherardizing), aluminum, lead, etc., and in retinning. (Retinning is included with these processes as an operation distinct from the manufacture of tin plate and terneplate, for which separate production statistics are compiled.) The "Value of products" for the industry represents, to a large extent, receipts for work done on materials owned by others. (For total production of galvanized sheets, plates, strips, and wire, see report on Steel Works and Rolling Mill Products.)

The phrase "not done in plants operated in connection with rolling mills" refers in some cases to plants having no connection with rolling mills and in other cases to plants under the same ownership as rolling mills but operated as independent units and not usually located adjacent to the rolling mills.

SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

(Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States," namely, West Virginia, is, however, more important in the industry than some of the States shown separately.)

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and purchased electric energy	Value of products	Value added by manu- facture ¹
<i>United States</i>						
1931.....	60	1,011	\$1,170,056	\$1,668,996	\$4,060,302	\$2,391,306
1929.....	65	1,125	1,563,716	3,939,417	7,666,541	3,727,124
1927.....	59	963	1,448,940	3,722,411	6,950,855	3,228,444
1925.....	54	804	1,127,862	2,891,944	5,933,158	3,041,214
1923.....	51	877	1,183,464	3,363,069	6,327,338	2,964,260
1921.....	51	685	843,620	2,161,406	4,017,820	1,856,414
1919.....	52	1,665	2,247,953	10,532,288	14,475,682	3,943,394
1914.....	48	1,580	922,264	6,262,804	8,480,109	2,187,305
1909.....	46	1,447	780,796	5,718,099	7,338,330	1,619,631
1904.....	36	1,256	620,012	4,744,400	6,418,850	1,674,384
1899.....	28	585	229,406	1,677,584	2,470,703	793,119
Percent of increase or de- crease (—):						
1929-31.....	(²)	-10.1	-25.2	-57.6	-47.0	-35.8
1927-29.....	(²)	18.0	7.9	5.8	10.3	15.4
1925-27.....	(²)	18.5	28.5	28.7	17.2	6.2
1923-25.....	(²)	-8.3	-4.7	-14.0	-0.2	2.6
1921-23.....	—	28.0	40.3	55.6	57.5	59.7
1919-21.....	(²)	-58.9	-62.5	-79.5	-72.2	-52.9
1921-31.....	(²)	47.6	38.7	-22.8	1.1	28.8
1919-29.....	(²)	-32.4	-30.4	-62.6	-47.0	-5.5
1909-19.....	(²)	15.1	18.7	84.2	67.3	143.5
1899-1909.....	(²)	170.5	243.0	240.9	197.0	104.2
<i>States, 1931</i>						
California.....	9	40	\$50,109	\$61,560	\$174,804	\$113,244
Illinois.....	6	123	140,975	193,910	527,191	333,281
Maryland.....	3	11	11,274	15,282	29,572	24,290
Massachusetts.....	5	65	87,857	86,593	248,101	161,508
Michigan.....	4	129	136,102	82,201	302,641	220,440
New Jersey.....	3	37	48,139	88,525	180,421	91,806
New York.....	5	133	165,060	156,386	456,806	300,420
Ohio.....	5	51	70,518	81,280	253,610	172,330
Pennsylvania.....	6	209	222,666	327,171	759,762	432,591
Other States ³	11	213	231,350	576,088	1,117,394	541,306

¹ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

² Percent not computed where base is less than 100.

³ Alabama, 1 establishment; Connecticut, 1; Indiana, 1; Minnesota, 2; Missouri, 1; Oregon, 1; Washing-
ton, 1; West Virginia, 1; Wisconsin, 2.

HARDWARE NOT ELSEWHERE CLASSIFIED

[A preliminary report for this industry was issued under date of Aug. 20, 1932]

Description of the industry.—This industry title refers to a large and rather loosely defined group of metal commodities which do not belong specifically to any of the other industry classifications.

The term "hardware" is of so broad general application that its use in the schedule necessarily entails misunderstanding and differences in interpretation. Obviously it would be impracticable, in drafting the schedule, either to explain in detail just what commodities the word should be understood to cover, or to list all such commodities. Furthermore, it has been found that manufacturers of a general line of metal goods of whatever description do not, in many cases, keep their records in such form as to enable them to supply separate data on their output of classes of hardware which belong to different census classifications.

Moreover, it should be borne in mind that many commodities retailed and generally regarded as hardware are not covered by this industry title. Among the more important of such items are nails and spikes, wire and wire products, small machines such as grinders and lawn mowers, plumbers' supplies, tools and cutlery, screws and bolts, sporting and athletic goods, tinware, and stoves.

Considerable quantities of hardware normally belonging to this industry are made as secondary products by establishments in more or less related industries. In some cases, however, such products are not specifically reported as hardware but are merely listed as "Other products." The value of "Hardware Not Elsewhere Classified" made as secondary products in other industries, as given in table 3, does not, therefore, cover the total production of hardware in other industries.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	451	36,118	\$37,269,297	\$38,318,046	\$115,900,290	\$77,582,244
1929.....	485	52,300	67,702,255	70,480,210	229,477,507	152,997,267
1927.....	485	47,834	60,827,474	71,877,055	208,235,580	136,376,531
1925.....	476	52,349	65,561,817	77,802,839	225,052,044	147,549,805
1923.....	473	52,205	63,470,745	80,597,525	215,960,129	135,302,604
1921.....	456	35,228	36,240,193	41,520,050	120,599,728	79,079,678
1919.....	585	46,180	49,273,749	62,815,258	168,661,444	105,846,066
1914.....	597	43,724	23,831,573	30,860,582	77,359,668	46,494,089
1909.....	622	41,822	20,985,288	27,520,121	70,082,860	42,563,739
1904.....	527	35,108	16,204,470	18,461,822	50,590,897	32,129,575
1899.....	461	29,403	12,639,960	16,295,412	39,996,145	23,700,733
Percent of increase or decrease (-):						
1929-31.....	-7.0	-30.9	-45.0	-49.9	-49.5	-49.3
1927-29.....		9.3	11.3	6.4	10.2	12.2
1925-27.....	1.9	-8.6	-7.2	-7.3	-7.5	-7.6
1923-25.....	.6	1.3	3.3	-3.8	4.2	9.0
1921-23.....	3.7	48.2	75.1	94.1	79.1	71.2
1919-21.....	-22.1	-23.7	-26.5	-33.9	-28.5	-25.3
1921-31.....	-1.1	2.5	2.8	-7.7	-3.9	-1.9
1919-29.....	-17.1	12.8	37.4	21.8	36.1	44.5
1909-19.....	-5.9	10.4	134.8	128.2	140.6	148.7
1899-1909.....	34.9	42.2	66.0	68.9	75.2	79.6
<i>States, 1931</i>						
California.....	27	286	\$391,150	\$400,675	\$1,106,878	\$706,203
Connecticut.....	53	12,937	12,606,155	10,410,374	33,035,714	22,616,340
Illinois.....	77	3,788	4,120,376	5,544,326	16,082,347	10,538,021
Indiana.....	15	432	389,899	453,960	1,601,838	1,147,878
Iowa.....	5	288	206,929	277,710	732,719	455,009
Kentucky.....	4	174	184,130	286,186	691,159	404,973
Massachusetts.....	30	780	884,728	993,765	2,838,263	1,844,598
Michigan.....	32	7,311	8,590,719	8,486,157	27,662,774	19,176,617
New Jersey.....	19	503	574,220	857,900	2,274,853	1,416,953
New York.....	61	2,102	2,465,148	3,002,530	8,384,516	5,381,986
Ohio.....	33	2,449	2,383,369	2,899,827	7,632,623	4,732,796
Pennsylvania.....	44	3,162	2,971,036	2,636,624	7,606,886	4,970,262
Rhode Island.....	6	79	77,780	149,934	374,771	224,837
Wisconsin.....	18	998	771,626	837,109	3,344,195	2,507,086
Other States ³	27	829	652,022	1,071,969	2,530,654	1,458,685

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Kansas, 1 establishment; Maine, 2; Maryland, 2; Minnesota, 4; Missouri, 5; Nebraska, 1; New Hampshire, 2; Tennessee, 2; Texas, 1; Vermont, 1; Virginia, 2; Washington, 3; and West Virginia, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	36,118	36,397	37,266	38,251	38,512	38,321	36,704	35,683	34,784	34,333	<i>34,219</i>	34,372	34,480
1929.....	52,306	53,299	54,881	55,125	55,143	54,390	53,788	53,425	52,035	51,369	50,114	47,405	<i>46,094</i>
1925.....	52,349	<i>50,676</i>	51,235	52,158	51,977	51,719	52,054	51,817	52,462	52,705	53,547	53,850	53,988
1919.....	46,180	<i>42,356</i>	43,218	43,542	43,754	44,170	44,732	40,177	47,799	47,810	48,864	50,315	50,843
1914.....	43,724	45,794	46,181	46,421	45,792	44,721	43,450	42,002	42,440	42,017	42,225	41,999	<i>41,646</i>
<i>States, 1931</i>													
California.....	286	316	316	314	304	321	302	299	247	<i>246</i>	260	249	260
Connecticut.....	12,637	13,619	13,395	13,469	13,291	13,215	12,970	12,806	12,608	12,586	12,523	12,534	<i>12,264</i>
Illinois.....	2,788	3,669	3,801	3,879	3,958	3,925	3,856	3,810	3,774	3,770	3,696	3,604	<i>3,514</i>
Indiana.....	432	468	436	461	486	435	423	409	417	<i>403</i>	418	414	420
Iowa.....	288	320	321	335	327	312	305	281	276	256	250	241	<i>235</i>
Kentucky.....	174	209	193	196	201	196	176	170	158	151	151	<i>153</i>	144
Massachusetts.....	750	734	768	697	864	827	748	721	690	769	779	803	766
Michigan.....	7,311	6,699	7,412	7,935	8,334	8,269	7,551	7,240	6,935	6,009	<i>6,499</i>	6,886	7,359
New Jersey.....	503	502	542	545	559	560	488	510	444	463	464	479	481
New York.....	2,102	2,255	2,293	2,233	2,174	2,218	2,172	2,062	1,988	2,000	1,996	<i>1,911</i>	1,917
Ohio.....	2,449	2,345	2,448	2,647	2,693	2,721	2,573	2,421	2,391	2,315	2,287	<i>2,266</i>	2,278
Pennsylvania.....	3,162	3,224	3,281	3,304	3,285	3,328	3,262	3,118	3,097	<i>2,987</i>	3,013	3,031	3,019
Rhode Island.....	79	63	74	74	72	68	66	69	75	89	91	106	98
Wisconsin.....	998	1,078	1,126	1,131	1,129	1,100	1,092	1,043	843	832	916	<i>813</i>	872

¹ No comparable statistics for years prior to 1914.

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1925 TO 1931

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for other years represent production. See sec. 16, p. 9]

KIND	1931	1929	1927	1925
1. "Hardware Not Elsewhere Classified," industry, all products, total value.....	\$115,900,290	\$220,477,507	\$208,253,586	\$225,052,644
2. Hardware.....	107,066,835	206,417,177	189,411,970	195,778,918
3. Other products (not normally belonging to the industry).....	8,833,455	23,060,330	18,841,616	29,273,726
4. Hardware not elsewhere classified, made as secondary products in other industries, ¹ value.....	8,922,060	14,500,655	9,474,845	14,490,685
Hardware not elsewhere classified, all industries: Aggregate (sum of 2 and 4).....	115,988,895	220,917,832	198,886,815	210,269,603
Builders' hardware other than locks.....	28,999,869	58,308,832	42,624,749	
Locks:				
Cabinet.....	2,752,611	4,456,497		89,961,105
Padlocks.....	3,650,744	6,547,317		
Trunk, suitcase, and luggage.....	1,148,071	2,197,984	37,281,124	
Door (building).....	4,172,587			
Motor-vehicle.....	2,549,831	21,422,492		
Other.....	1,610,498			
Casket hardware.....	4,806,086	5,912,207	4,755,878	5,127,795
Furniture and cabinet hardware other than locks.....	9,342,009	17,138,072	10,693,783	14,268,669
Piano and organ hardware.....	112,348	400,619	1,232,370	1,702,729
Saddlery and harness hardware.....	1,664,212	3,773,008	5,510,458	6,018,220
Trunk and suitcase hardware other than locks.....	1,110,798	2,486,860	3,859,004	4,143,178
Vehicle hardware other than locks:				
Motor-vehicle.....	31,431,766	60,812,953	50,178,037	44,954,758
Other vehicle.....	342,709	410,994	666,327	
Vacuum bottles, jugs, etc.....	3,006,162	5,460,131	5,053,690	4,857,235
Other hardware, and hardware not reported by kind.....	19,282,594	31,583,857	37,031,395	38,635,914

¹ See final paragraph of text, p. 808, not specifically reported as such.

² Data for motor-vehicle locks and for motor-vehicle hardware other than locks were called for separately on the schedule, but some of the most important manufacturers combined the value of these products and reported it as "motor-vehicle hardware." Thus the item for "Motor-vehicle" under "Vehicle hardware other than locks" includes the value of motor-vehicle locks not reported separately.

TABLE 4.—PRINCIPAL PRODUCTS, BY KIND AND VALUE, BY STATES: 1931

[This table presents statistics for all States for which separate figures can be given without disclosing, exactly or approximately, data for individual establishments. Certain of the States not shown separately, however, reported larger values of the specified classes of products than some of those for which separate figures are given]

KIND AND STATE	Number of establishments	Value
Builders' hardware, other than locks, total.....	172	\$28,090,809
California.....	14	308,559
Connecticut.....	18	13,064,409
Illinois.....	20	6,010,391
Indiana.....	4	261,510
Maryland.....	3	43,022
Massachusetts.....	6	96,812
Michigan.....	9	606,832
New Jersey.....	9	1,082,226
New York.....	28	1,858,404
Ohio.....	11	1,519,684
Pennsylvania.....	17	3,042,780
Wisconsin.....	8	177,715
Other States.....	10	921,153
Casket hardware, total.....	43	4,806,080
Connecticut.....	9	919,494
Illinois.....	8	1,037,353
Indiana.....	3	298,095
Massachusetts.....	4	400,100
Michigan.....	4	193,218
New York and Pennsylvania.....	4	1,000,179
Ohio.....	6	834,879
Other States.....	5	110,198
Furniture and cabinet hardware, other than locks, total.....	60	9,342,009
Connecticut.....	11	741,884
Illinois and Indiana.....	10	3,900,142
Michigan.....	11	2,685,486
Missouri.....	4	26,806
New Jersey and New York.....	14	538,346
Ohio and Pennsylvania.....	11	800,610
Other States.....	8	588,759
Locks, total.....	98	15,890,342
Connecticut.....	9	6,150,145
Illinois.....	15	1,160,096
Michigan.....	6	1,105,191
New Jersey.....	3	94,698
New York.....	17	2,102,037
Ohio.....	9	604,306
Pennsylvania.....	14	1,720,281
Wisconsin.....	7	1,825,468
Other States.....	18	1,127,540
Vehicle hardware, other than locks, total.....	67	31,774,475
Connecticut.....	12	980,868
Illinois, Michigan, and Ohio.....	27	26,604,509
Kentucky.....	3	398,322
New York.....	6	1,389,061
Wisconsin.....	4	535,214
Other States.....	15	1,859,601

NAILS, SPIKES, ETC., NOT MADE IN WIRE MILLS OR IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—The principal products of the establishments classified in this industry are wire nails, brads, and spikes, cut nails and spikes, horseshoe nails, tacks, staples, etc. Wire nails, brads, and spikes are made chiefly in wire mills and in wire-drawing departments of rolling mills. Detailed statistics covering the production of wire nails, brads, spikes, etc., in all industries have been assembled in Table 5 of the report for Wire Drawn from Purchased Rods (p. 868); and those for cut nails, spikes, tacks, and horseshoe nails are brought together in Table 5 of the report for Steel-Works and Rolling-Mill Products (p. 836).

The phrase "not made in plants operated in connection with rolling mills" refers to production in plants operated entirely independently of rolling mills, although in some cases under the same ownership.

SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States," namely, New Hampshire, is, however, more important in the industry than any of the States shown separately except Massachusetts]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	46	1, 570	\$1, 670, 306	\$2, 081, 668	\$6, 827, 854	\$3, 846, 186
1929.....	55	2, 027	2, 553, 417	5, 955, 661	12, 854, 745	6, 899, 084
1927.....	56	2, 100	2, 670, 016	5, 156, 906	11, 753, 468	6, 596, 562
1295.....	58	2, 227	2, 609, 773	5, 645, 626	12, 318, 494	6, 672, 868
1923.....	61	2, 849	3, 235, 142	7, 005, 168	13, 299, 740	6, 294, 572
1921.....	56	2, 412	2, 575, 961	5, 670, 025	10, 976, 307	5, 306, 282
1919.....	65	3, 355	3, 397, 562	8, 874, 747	17, 583, 344	8, 708, 597
1914.....	64	2, 644	1, 507, 689	3, 594, 319	7, 195, 600	3, 604, 281
1909.....	57	2, 765	1, 352, 555	3, 972, 412	8, 191, 620	4, 210, 208
1904.....	76	3, 681	1, 684, 077	4, 686, 349	8, 922, 896	4, 236, 547
1899.....	102	4, 477	2, 042, 250	8, 561, 571	14, 777, 299	6, 215, 728
Percent of increase or decrease (—):						
1929-31.....	(³)	—22. 5	—34. 6	—49. 9	—46. 9	—44. 3
1927-29.....	(³)	—3. 5	—4. 4	15. 5	9. 4	4. 6
1925-27.....	(³)	—5. 7	2. 3	—8. 7	—4. 6	—1. 1
1923-25.....	(³)	—21. 8	—19. 3	—19. 4	—7. 4	6. 0
1921-23.....	(³)	18. 1	25. 6	23. 5	21. 2	18. 6
1919-21.....	(³)	—28. 1	—24. 2	—36. 1	—37. 6	—39. 1
1921-31.....	(³)	—34. 9	—35. 2	—47. 4	—37. 8	—27. 5
1919-29.....	(³)	—39. 6	—24. 8	—52. 9	—26. 9	—20. 8
1909-19.....	(³)	21. 3	151. 2	123. 4	114. 7	106. 4
1899-1909.....	—44. 1	—38. 2	—33. 8	—53. 6	—44. 6	—32. 1
<i>States, 1931</i>						
Illinois.....	5	34	\$41, 372	\$57, 327	\$160, 895	\$103, 568
Indiana.....	4	99	56, 297	102, 824	255, 016	182, 192
Massachusetts.....	17	640	655, 915	1, 141, 676	2, 735, 669	1, 593, 993
Ohio.....	3	83	100, 602	202, 044	439, 676	237, 632
Pennsylvania.....	5	97	80, 114	112, 575	263, 602	151, 027
Other States ⁴	12	617	736, 006	1, 365, 222	2, 972, 996	1, 607, 774

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9. For total production of wire nails, spikes, etc., in 1931, 1929, and 1927, by all plants, including wire mills and wire-drawing departments of rolling mills, see table 5, p. 836, of report for Steel-Works and Rolling-Mill Products.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Connecticut, 3 establishments; Maryland, 3; New Hampshire, 1; New Jersey, 1; New York, 3; and West Virginia, 1.

PLUMBERS' SUPPLIES, NOT INCLUDING PIPE OR VITREOUS-CHINA SANITARY WARE

[A preliminary report for this industry was issued under date of Nov. 12, 1932]

Description of the industry.—This industry embraces establishments whose principal products are porcelain-enameled (enameled-iron) sanitary ware (bathtubs, laundry tubs, lavatories, and sinks), plumbers' brass goods, plumbers' woodwork, galvanized-iron and copper range boilers, and miscellaneous bathroom and other fixtures closely related to plumbing work. Manufacturers of vitreous-china and semivitreous or porcelain (all-clay) sanitary ware are classified in the Pottery industry, but production figures for such sanitary ware are included in table 4.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1923 TO 1931, AND FOR STATES, 1931

[Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	238	19,688	\$20,440,001	\$26,003,069	\$70,935,892	\$44,932,893
1929.....	255	27,960	37,066,997	49,032,599	129,673,784	80,641,185
1927.....	231	29,245	40,212,198	55,633,327	145,262,311	89,628,084
1925.....	239	33,280	46,953,808	63,610,253	167,878,414	104,268,101
1923.....	234	27,201	38,046,537	51,469,378	132,664,774	81,195,390
Percent of increase or decrease (—):						
1929-31.....	-6.7	-29.6	-44.9	-47.0	-45.3	-44.3
1927-29.....	10.4	-4.4	-7.8	-11.9	-10.7	-10.0
1925-27.....	-3.3	-12.1	-14.4	-12.5	-13.5	-14.0
1923-25.....	2.1	22.3	23.4	23.6	26.5	28.4
<i>States, 1931</i>						
California.....	13	885	\$1,086,820	\$1,018,864	\$2,923,298	\$1,604,434
Connecticut.....	11	730	817,307	829,672	2,756,411	1,920,739
Illinois.....	31	2,235	2,274,740	3,060,358	8,468,645	5,402,287
Indiana.....	10	517	458,118	789,987	1,699,060	909,673
Maryland.....	6	845	805,340	760,490	2,640,650	1,880,160
Massachusetts.....	17	579	707,798	1,666,116	3,270,804	1,604,688
Michigan.....	15	839	813,029	1,403,192	3,481,009	2,077,817
Missouri.....	5	159	168,418	118,267	455,711	337,444
New Jersey.....	15	991	1,177,008	1,618,320	3,685,419	2,367,090
New York.....	25	600	739,028	1,515,549	3,108,809	1,693,350
Ohio.....	33	1,966	2,288,201	2,705,377	7,524,211	4,818,834
Pennsylvania.....	28	3,323	3,405,497	5,110,221	12,626,119	7,515,898
Wisconsin.....	12	2,203	2,327,705	2,914,695	8,361,203	5,446,568
Other States.....	17	3,816	3,370,992	2,485,901	9,633,793	7,147,892

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.
² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ No comparable data for years prior to 1923.

⁴ Alabama, 1 establishment; Delaware, 2; Iowa, 2; Kansas, 1; Kentucky, 1; Maine, 1; Minnesota, 1; New Hampshire, 1; Rhode Island, 2; Tennessee, 1; Vermont, 1; Virginia, 1; Washington, 1; West Virginia, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, AND 1925, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	19,688	20,383	20,766	20,533	20,333	20,357	20,355	20,267	19,147	19,517	19,214	18,360	<i>17,034</i>
1929.....	27,960	29,255	29,610	29,593	29,516	29,281	28,694	28,046	28,124	27,661	26,915	25,623	<i>23,805</i>
1925.....	33,280	<i>31,518</i>	32,574	33,156	33,201	33,021	32,730	33,052	33,527	33,897	34,093	34,354	34,245
<i>States, 1931</i>													
California.....	885	939	937	922	902	932	791	809	812	945	940	926	<i>765</i>
Connecticut.....	730	726	730	759	798	787	764	722	716	720	704	694	<i>623</i>
Illinois.....	2,235	2,391	2,339	2,333	2,252	2,296	2,239	2,230	2,183	2,175	2,162	2,111	<i>2,106</i>
Indiana.....	517	541	551	473	523	550	632	530	541	476	481	462	<i>449</i>
Maryland.....	845	880	885	848	819	<i>800</i>	827	819	861	872	874	840	819
Massachusetts....	579	579	582	582	573	576	585	589	575	578	589	579	<i>559</i>
Michigan.....	839	850	878	842	876	872	883	848	829	818	804	788	<i>783</i>
Missouri.....	159	174	176	174	166	166	161	156	163	148	<i>144</i>	145	145
New Jersey.....	991	1,208	1,201	1,198	1,174	1,117	1,149	1,106	1,085	808	657	631	<i>654</i>
New York.....	600	599	596	598	616	612	604	609	606	607	612	594	<i>549</i>
Ohio.....	1,966	1,973	2,000	1,946	1,971	2,000	2,026	2,049	1,993	<i>1,829</i>	1,945	1,937	1,919
Pennsylvania.....	3,323	3,164	3,354	3,390	3,366	3,391	3,417	3,498	3,422	3,386	3,370	3,257	<i>2,857</i>
Wisconsin.....	2,203	2,134	2,202	2,195	2,215	2,236	2,257	2,281	2,258	2,208	2,168	2,155	<i>2,133</i>

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1927 TO 1931

[The figures for 1931 and 1927 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers]

KIND	1931	1929	1927
1. "Plumbers' Supplies, Not Including Pipe or Vitreous-china Sanitary Ware" industry, all products, total value.....	\$70,935,892	\$129,673,784	\$145,262,311
2. Plumbers' supplies, not including pipe, vitreous-china sanitary ware, or semivitreous or porcelain (all-clay) sanitary ware.....	62,885,943	114,820,771	133,483,890
Other products (not normally belonging to the industry).....	8,049,940	14,844,013	11,778,431
4. Plumbers' supplies made as secondary products in other industries.....	4,067,331	² 3,639,980	² 3,604,090
Plumbers' supplies, not including pipe, vitreous-china sanitary ware, or semivitreous or porcelain (all-clay) sanitary ware, all industries:			
Aggregate value (sum of 2 and 4).....	\$66,953,274	² \$118,460,701	² \$137,148,870
Enameled-iron sanitary ware, total value.....	\$21,353,195	\$45,238,155	\$63,841,810
Bathtubs:			
Number.....	444,539	943,905	1,163,001
Value.....	\$9,437,642	\$21,355,379	\$31,105,370
Laundry tubs:			
Number.....	50,215	175,319	175,253
Value.....	\$668,830	\$3,010,594	\$3,613,630
Lavatories:			
Number.....	520,730	1,116,847	1,322,425
Value.....	\$3,748,892	\$8,050,040	\$11,241,987
Sinks:			
Number.....	622,142	1,210,015	1,402,269
Value.....	\$6,810,116	\$12,872,142	\$17,880,832
Flush tanks:			
Number.....	17,888		
Value.....	\$147,290	(³)	(³)
Drinking fountains:			
Number reported:			
Number.....	15,020		
Value.....	\$100,200	(³)	(³)
Number not reported, value.....	\$240,225		
Range boilers and hot-water-heater tanks for domestic use: ⁴			
Galvanized iron:			
Number.....	718,438	783,044	866,161
Value.....	\$4,231,055	\$4,616,180	\$5,595,607
Copper:			
Number.....	45,185	35,193	25,029
Value.....	\$1,196,496	\$1,293,941	\$832,278
Plumbers' brass goods made in the Plumbers' Supplies industry, total value.....	\$28,624,864	\$46,012,661	\$41,810,944
Valves reported separately.....	\$6,570,148		
Faucets and spigots reported separately.....	\$4,077,630	\$24,455,890	\$20,567,987
Fittings reported separately.....	\$3,244,546		
Other plumbers' brass goods, and valves, faucets, spigots, and fittings not reported separately.....	\$14,732,540	\$22,150,762	\$15,242,957
Drinking fountains other than those made of enameled iron or porcelain:			
Number.....	10,430		
Value.....	\$230,839		
Toilet seats:			
Number.....	2,082,386	² \$20,658,764	² \$25,005,227
Value.....	\$4,259,711		
Other plumbers' supplies, value.....	\$7,057,114		

¹ These items do not include data for valves, faucets, spigots, and other plumbers' brass goods made outside the Plumbers' Supplies industry, as the schedules used in canvassing other industries in which valves, faucets, etc., are manufactured do not call separately for data on such products made of brass, as distinguished from those made of other metals. For total production of valves, faucets, etc., see table 6, p. 993.

² Revised.

³ Data for enameled-iron flush tanks and drinking fountains not called for separately on schedule prior to 1931; included in item for "Other plumbers' supplies."

⁴ For water heaters, see report for Stoves and Ranges, Heating Apparatus, and Steam Fittings, table 3, p. 549.

⁵ See footnote 3.

TABLE 4.—SANITARY WARE—PRODUCTION IN ALL INDUSTRIES, BY KIND, NUMBER, AND VALUE: 1927 TO 1931

KIND	1931	1929	1927
Aggregate value.....	\$41,279,714	\$75,347,460	\$94,135,163
Enameled-iron sanitary ware:			
Total value.....	\$21,353,195	\$45,288,155	\$63,841,819
Bathubs:			
Number.....	444,539	943,905	1,163,001
Value.....	\$9,437,642	\$21,355,379	\$31,105,370
Laundry tubs:			
Number.....	50,215	175,319	175,258
Value.....	\$808,830	\$3,010,594	\$3,613,630
Lavatories:			
Number.....	520,730	1,116,847	1,322,425
Value.....	\$3,748,892	\$8,050,040	\$11,241,987
Sinks:			
Number.....	622,142	1,210,615	1,402,269
Value.....	\$6,810,116	\$12,872,142	\$17,880,832
Flush tanks:			
Number.....	17,888	(¹)	(¹)
Value.....	\$147,290	(¹)	(¹)
Drinking fountains:			
Number reported:			
Number.....	15,020	(¹)	(¹)
Value.....	\$100,200	(¹)	(¹)
Number not reported, value.....	\$240,225	(¹)	(¹)
Drinking fountains other than those made of enameled-iron or porcelain:			
Number.....	10,430	(¹)	(¹)
Value.....	\$230,839	(¹)	(¹)
Toilet seats:			
Number.....	2,082,386	(¹)	(¹)
Value.....	\$4,259,711	(¹)	(¹)
Vitreous-china sanitary ware (exclusive of fittings), total value.	\$12,894,277	\$24,992,047	\$23,627,594
Bathroom and toilet:			
Closet bowls:			
Siphon jets:			
Number.....	170,918	317,672	225,465
Value.....	\$1,355,858	\$2,095,647	\$2,076,748
Washdowns:			
Number.....	746,264	1,364,804	1,539,863
Value.....	\$2,745,752	\$5,651,120	\$5,866,347
Reverse traps:			
Number.....	87,658	207,221	197,510
Value.....	\$443,288	\$1,005,491	\$1,017,347
Flush tanks:			
Lowdown (large and small):			
Number.....	788,415	1,202,396	1,312,739
Value.....	\$3,799,317	\$6,476,911	\$6,802,887
Other types:			
Number.....	3,985	19,776	49,890
Value.....	\$21,773	\$137,840	\$468,192
Lavatories:			
Number.....	226,346	347,809	346,117
Value.....	\$2,513,179	\$4,779,710	\$4,498,048
Other bathroom and toilet equipment, value.....	\$1,382,828	\$3,393,279	\$2,237,124
Other vitreous-china fixtures, including laundry tubs, drinking fountains, etc., value.....	\$632,282	\$1,452,049	\$660,906
Semivitreous or porcelain (all-clay) sanitary ware, exclusive of fittings, total value.....	\$1,995,179	\$3,965,429	\$5,465,966
Lavatories and bath tubs:			
Number.....	7,637	(¹)	(¹)
Value.....	\$64,589	\$231,600	(¹)
Laundry tubs and kitchen sinks:			
Number.....	54,920	(¹)	(¹)
Value.....	\$453,001	\$529,032	(¹)
Other semivitreous fixtures, value.....	\$1,477,589	\$3,294,797	(¹)
Concrete laundry trays:			
Tons.....	19,438	36,430	36,382
Value.....	\$546,513	\$1,101,829	\$1,199,784

¹ Revised.² Not strictly comparable with corresponding value for 1931 because items indexed to footnote 3 were not called for separately on schedule. Value of these items included in figure for "Other plumbers' supplies," in table 3.³ Not called for separately on schedule. (See note 2.)⁴ No data.⁵ Not called for separately on schedule.

SAFES AND VAULTS

Description of the industry.—The principal products of the establishments classified in this industry are fireproof and burglar-proof safes and vaults for banks, offices, and residences; money chests; safe-deposit boxes; vault doors; and safe locks.

SUMMARY FOR THE UNITED STATES, 1931, 1929, AND 1927, AND FOR OHIO, 1931

[Ohio is the only State for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. No comparable figures can be given for years prior to 1927]

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and purchased electric energy	Value of products ¹	Value added by manu- facture ²
<i>United States</i>						
1931.....	25	2,044	\$2,176,226	\$4,073,014	\$11,006,575	\$7,533,561
1929.....	27	3,033	4,438,693	6,392,461	19,362,192	12,969,731
1927.....	25	3,380	4,494,497	7,226,295	18,439,550	11,213,255
Percent of decrease (—): 1929-31.....	(3)	-32.6	-51.0	-36.3	-40.1	-41.9
<i>States, 1931</i>						
Ohio.....	11	1,176	\$1,309,681	\$1,680,691	\$6,626,198	\$4,045,507
Other States ⁴	14	868	866,545	2,392,323	4,980,377	2,588,054

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 10, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent, not computed where base is less than 100.

⁴ California, 2 establishments; Indiana, 1; Kentucky, 1; Maryland, 1; Missouri, 2; New York, 2; Pennsylvania, 4; Wisconsin, 1.

SAWS

[A preliminary report for this industry was issued under date of Nov. 9, 1932]

Description of the industry.—The establishments in this industry are engaged primarily in the manufacture of saws. Their products comprise saws and saw blades of all types, for cutting wood, metal, and other substances, such as carpenters' and butchers' saws, pruning saws, and bucksaws, and blades for hand and power hack saws, band saws, and circular saws. The industry does not include the manufacture of saw frames, saw tables, and sawing machines.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," namely, Indiana and Pennsylvania, are, however, more important in the industry than any of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy ¹	Value of products ²	Value added by manufacture ³
<i>United States</i>						
1931.....	78	3,005	\$3,083,728	\$4,034,969	\$11,572,385	\$7,537,416
1929.....	81	4,137	5,727,416	6,884,331	22,614,958	15,730,627
1927.....	77	4,182	5,753,856	7,674,394	22,627,990	14,953,596
1925.....	71	4,710	5,873,393	8,224,443	24,709,211	16,484,768
1923.....	80	5,420	6,730,442	9,739,996	30,786,858	21,046,862
1921.....	79	3,788	4,086,840	6,479,913	18,185,297	11,705,384
1919.....	112	5,510	6,280,807	11,792,224	31,460,557	19,668,333
1914.....	100	4,560	3,019,497	4,714,186	12,517,165	7,802,979
1909.....	96	4,832	2,856,291	4,911,766	11,635,631	6,623,865
1904.....	83	4,650	2,707,423	4,035,630	9,819,787	5,784,257
1899.....	96	3,215	1,692,757	2,600,217	6,443,748	3,843,531
Percent of increase or decrease (—):						
1929-31.....	(⁴)	-27.4	-46.2	-41.4	-48.8	-52.1
1927-29.....	(⁴)	-1.1	-0.5	-10.3	-0.1	5.2
1925-27.....	(⁴)	-11.2	-2.0	-6.7	-8.4	-9.3
1923-25.....	(⁴)	-13.1	-12.7	-15.6	-19.7	-21.7
1921-23.....	(⁴)	43.1	64.7	50.3	69.3	78.8
1919-21.....	-29.5	-31.3	-34.9	-45.0	-42.2	-40.5
1921-31.....	(⁴)	-20.7	-24.5	-37.7	-36.4	-35.6
1919-29.....	-27.7	-24.9	-8.8	-41.6	-28.1	-20.0
1909-19.....	(⁴)	14.0	119.9	140.1	172.7	196.9
1899-1909.....	-----	50.3	68.7	88.9	79.0	72.3
<i>States, 1931</i>						
California.....	3	21	\$22,805	\$31,957	\$77,548	\$45,591
Massachusetts.....	9	462	477,998	513,345	1,817,189	1,303,844
Michigan.....	7	66	83,764	115,674	347,405	231,731
New York.....	11	220	241,386	267,420	1,258,751	991,331
Other States ⁴	48	2,227	2,257,775	3,106,673	8,071,492	4,964,919

¹ Includes cost of mill supplies for 1927 and earlier years but not for 1929 and 1931.

² For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

³ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

⁴ Percent not computed where base is less than 100.

⁵ Alabama, 2 establishments; Connecticut, 4; Georgia, 1; Illinois, 8; Indiana, 3; Louisiana, 1; Maine, 1; Maryland, 1; Mississippi, 1; Missouri, 1; New Hampshire, 1; New Jersey, 2; North Carolina, 1; Ohio, 5; Oregon, 2; Pennsylvania, 9; Rhode Island, 2; South Carolina, 1; Tennessee, 1; Washington, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	3,005	3,338	3,322	3,328	3,283	2,904	2,880	2,733	2,719	2,705	2,938	2,850	2,895
1929.....	4,137	4,229	4,193	4,189	4,097	4,101	4,132	3,952	4,114	4,152	4,146	4,183	4,153
1925.....	4,710	4,860	4,895	4,865	4,835	4,735	4,649	4,557	4,543	4,541	4,593	4,654	4,787
1919.....	5,510	5,527	5,484	5,400	5,417	5,355	5,370	5,386	5,454	5,566	5,592	5,715	5,884
1914.....	4,560	4,755	4,733	4,784	4,755	4,710	4,662	4,584	4,494	4,382	4,299	4,294	4,263
1909.....	4,832	4,705	4,777	4,799	4,753	4,707	4,719	4,810	4,795	4,848	4,881	5,062	5,119
<i>States, 1931</i>													
California.....	21	23	23	23	23	23	22	21	19	20	19	20	21
Massachusetts.....	462	515	526	542	559	425	436	430	427	431	423	422	411
Michigan.....	66	85	86	87	86	73	68	51	49	53	50	54	50
New York.....	229	255	254	256	255	226	203	202	200	205	232	231	231

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927

[The figures for 1931 and 1927 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 10, p. 9.]

KIND	1931	1929	1927
1. Saws industry, all products, total.....	\$11,572,385	\$22,614,958	\$22,627,990
2. Saws.....	8,554,616	18,233,237	18,392,850
3. Other products (not normally belonging to the industry), value, and receipts for repair work.....	3,017,769	4,381,721	4,235,140
4. Saws made as secondary products in other industries.....	916,519	2,164,729	1,145,599
Saws, all industries: Total (sum of 2 and 4).....	9,471,135	20,397,966	19,538,449
Woodworking saws: Power-saw blades, total.....	2,925,643	6,743,171	7,643,501
Circular.....	1,463,464	3,714,411	4,014,495
Band.....	1,291,020	3,028,760	3,629,006
Other.....	171,159		
Other woodworking saws, total.....	2,261,891	5,342,384	6,870,300
Handsaws (including miter, coping, etc.).....	1,407,296	(2)	(2)
Crosscut saws and bucksaws.....	854,595		
Metal-working saws: Power-saw blades, except hacksaw, total.....	924,590	1,620,637	1,450,868
Circular.....	430,170	(2)	(2)
Band.....	494,420		
Hack-saw blades, hand and power.....	3,216,983	1,305,161	2,812,116
Other types of saws, and saws not distributed as to kind.....	142,028	2,087,613	752,674

¹ Revised.

² No comparable data.

SCREW-MACHINE PRODUCTS AND WOOD SCREWS

[A preliminary report for this industry was issued under date of July 2, 1932]

Description of the industry.—This classification embraces (1) establishments engaged primarily in the manufacture of machine screws and other screw-machine products (a great variety of special parts, many of which are threaded) and (2) those whose principal products are screws for use in wood.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	275	12,047	\$13,478,221	\$16,141,995	\$43,697,573	\$27,555,578
1929.....	273	19,881	28,986,604	39,462,568	105,974,662	66,512,094
1927.....	218	13,690	18,055,095	25,910,223	60,020,261	34,110,038
1925.....	205	14,071	18,193,669	25,070,378	59,614,894	34,538,516
1923.....	190	13,234	16,943,362	21,564,854	52,945,878	31,881,024
1921.....	168	8,653	9,344,553	10,038,988	25,783,781	15,744,743
1919.....	154	15,151	16,969,393	20,535,431	55,475,042	34,939,611
1914.....	78	8,089	4,260,132	5,408,124	13,464,442	8,056,318
1909.....	54	5,131	2,424,020	3,463,004	9,213,067	5,744,063
1904.....	33	3,453	1,498,189	1,682,109	4,845,444	3,163,275
1899.....	33	3,527	1,423,838	1,720,455	4,658,467	2,938,012
Percent of increase or decrease(—):						
1929-31.....	0.7	-30.4	-53.5	-59.1	-58.8	-58.6
1927-29.....	25.2	45.2	60.5	52.3	76.6	95.0
1925-27.....	6.3	-2.7	-8	3.3	.7	-1.2
1923-25.....	7.9	6.3	7.4	16.3	12.6	10.1
1921-23.....	13.1	52.9	81.3	114.8	105.3	99.3
1919-21.....	9.1	-42.9	-44.9	-51.1	-53.5	-54.9
1921-31.....	63.7	39.2	44.2	60.8	69.5	75.0
1919-29.....	77.3	31.2	70.8	92.2	91.0	96.4
1909-19.....	(³)	195.3	600.1	492.0	502.1	508.3
1899-1909.....	(³)	45.6	70.2	101.6	97.8	95.5
<i>States, 1931</i>						
California.....	11	64	\$72,937	\$108,479	\$268,152	\$161,673
Connecticut.....	31	2,381	2,041,734	3,054,463	6,428,629	3,374,166
Illinois.....	41	1,639	1,837,861	2,357,966	7,420,130	5,062,164
Indiana.....	10	186	222,706	280,898	704,682	423,684
Massachusetts.....	23	1,076	1,335,097	1,174,619	3,896,120	2,721,501
Michigan.....	44	1,980	2,916,104	3,372,868	9,109,915	5,737,047
Missouri.....	4	48	61,745	88,705	205,918	167,213
New York.....	23	370	473,033	649,846	2,070,063	1,420,217
Ohio.....	41	2,753	2,797,470	3,614,898	9,069,201	5,454,303
Pennsylvania.....	21	522	529,900	440,064	1,537,633	1,097,569
Rhode Island.....	9	830	728,750	641,520	1,755,459	1,113,939
Wisconsin.....	6	65	77,407	104,635	253,538	148,903
Other States ⁴	11	233	333,447	305,034	978,233	673,199

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Maryland, 2 establishments; Minnesota, 2; New Hampshire, 1; New Jersey, 5; Washington, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
United States													
1931	12,047	12,441	12,835	13,398	13,409	13,225	12,574	12,066	11,212	11,026	10,791	10,910	10,679
1929	19,881	19,689	20,346	21,098	21,130	21,293	21,538	21,489	20,925	19,091	18,725	19,723	19,915
1925	14,071	13,283	13,503	13,479	13,598	13,969	14,032	13,921	13,959	14,421	14,845	14,920	14,923
1919	15,151	14,697	14,377	14,523	14,422	14,421	14,590	14,896	15,428	15,688	15,983	16,242	16,546
1914	8,089	8,978	8,850	8,761	8,601	8,408	8,200	8,053	7,809	7,608	7,239	7,208	7,352
1909	5,131	4,610	4,744	4,859	4,831	4,901	5,013	5,156	5,221	5,350	5,440	5,628	5,817
States, 1931													
California	64	67	61	66	68	71	68	58	54	58	50	69	63
Connecticut	2,381	2,539	2,517	2,521	2,507	2,464	2,382	2,336	2,292	2,339	2,267	2,230	2,172
Illinois	1,539	1,597	1,629	1,594	1,602	1,566	1,519	1,495	1,494	1,462	1,494	1,534	1,479
Indiana	186	202	205	209	213	212	194	192	172	163	161	160	163
Massachusetts	1,076	1,096	1,103	1,178	1,170	1,140	1,117	1,074	1,061	999	998	998	978
Michigan	1,980	2,116	2,200	2,499	2,508	2,382	2,053	1,858	1,616	1,618	1,660	1,663	1,682
Missouri	48	61	59	64	47	48	46	46	42	44	41	42	39
New York	370	375	379	403	393	388	383	386	377	375	336	335	316
Ohio	2,753	2,782	2,972	3,164	3,172	3,237	3,116	2,950	2,474	2,374	2,261	2,300	2,238
Pennsylvania	522	499	583	542	569	552	543	527	521	486	476	476	485
Rhode Island	830	811	811	840	834	839	837	837	828	833	840	839	814
Wisconsin	65	63	69	77	79	78	68	63	62	55	63	63	63

TABLE 3.—PRODUCTS, BY KIND AND VALUE: 1927 TO 1931

[The figures for 1931 and 1927 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 16, p. 3. No comparable statistics can be given for years prior to 1927]

KIND	1931	1929	1927
1. "Screw-machine Products and Wood Screws" industry, all products, total value	\$43,697,573	\$105,974,662	\$60,020,261
2. Screw-machine products and wood screws	35,904,603	87,080,909	52,547,750
3. Other products (not normally belonging to the industry)	7,792,970	18,893,753	7,472,511
4. Screw-machine products and wood screws made as secondary products in other industries	5,660,712	17,377,446	7,373,213
Screw-machine products and wood screws, all industries: Aggregate (sum of 2 and 4)	41,565,315	104,458,355	59,920,963
Screw-machine products, value	\$36,379,282	\$91,468,367	\$51,046,465
Wood screws:			
Quantity reported:			
Gross	24,979,903	53,605,939	
Value	\$4,508,022	\$10,725,174	
Quantity not reported, value	\$678,011	\$2,264,814	\$8,874,493

SPRINGS, STEEL, EXCEPT WIRE, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

[A preliminary report for this industry was issued under date of June 29, 1932]

Description of the industry.—The establishments classified in this industry are engaged primarily in the manufacture of leaf springs—railway, motor-vehicle, carriage, wagon, etc.—and of hot-wound springs, railway and other. Wire springs are products of the Wire-work Not Elsewhere Classified industry.

The phrase "not made in plants operated in connection with rolling mills" refers to production in plants operated entirely independently of rolling mills, although in some cases under the same ownership.

The total production of steel springs in all industries, including those made in plants operated in connection with rolling mills, is shown in Table 3.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manu- facture ²
<i>United States</i>						
1931.....	98	2,938	\$3,633,836	\$7,541,068	\$15,157,727	\$7,616,629
1929.....	86	5,842	9,313,927	25,372,478	46,672,319	21,299,841
1927.....	94	5,753	8,912,961	24,598,568	43,820,633	19,222,065
1925.....	98	5,897	8,988,669	23,609,007	44,469,221	20,860,214
1923.....	114	8,634	12,782,180	31,748,019	59,392,180	27,644,161
1921.....	126	5,358	6,779,358	16,007,255	31,750,373	15,743,118
1919.....	112	8,981	11,157,874	28,019,180	51,479,535	23,460,355
1914.....	84	3,703	2,601,848	6,142,927	11,594,992	5,452,065
1909.....	54	3,196	1,852,917	4,727,270	9,005,362	4,278,092
1904.....	52	2,476	1,242,553	2,741,764	5,740,836	2,969,072
1899.....	48	2,102	1,061,006	3,024,656	5,690,499	2,665,843
Percent of increase or decrease (—):						
1929-31.....	(³)	-49.7	-61.0	-70.3	-67.5	-64.2
1927-29.....	(³)	1.5	4.5	3.1	6.5	10.8
1925-27.....	(³)	-2.4	-0.8	4.2	-1.5	-7.9
1923-25.....	-14.0	-31.7	-29.7	-25.6	-25.1	-24.5
1921-23.....	-9.5	61.1	88.5	98.3	87.1	75.6
1919-21.....	12.5	-40.3	-39.2	-42.9	-38.3	-32.9
1921-31.....	-22.2	-45.2	-46.4	-52.9	-52.3	-51.6
1919-29.....	-23.2	-35.0	-16.5	-9.4	-9.3	-9.2
1909-19.....	(³)	181.0	502.2	492.7	471.7	448.4
1899-1909.....	(³)	52.0	74.6	56.3	58.3	60.5

Footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>States, 1931</i>						
California.....	10	136	\$178,937	\$225,486	\$605,717	\$380,231
Connecticut.....	4	156	169,944	216,207	553,083	336,876
Illinois.....	9	346	407,821	686,325	1,751,196	1,004,871
Indiana.....	4	111	130,959	266,662	668,003	401,841
Massachusetts.....	3	30	62,216	44,075	144,037	99,602
Michigan.....	5	593	726,551	2,829,253	4,404,951	1,575,698
Missouri.....	5	98	102,516	153,997	445,055	291,058
New Jersey.....	6	45	66,462	47,605	196,891	140,190
New York.....	11	135	262,140	135,260	650,395	524,135
Pennsylvania.....	16	894	1,023,194	1,802,315	3,560,377	1,758,002
Texas.....	3	19	29,795	18,179	62,426	44,247
Washington.....	5	20	26,760	24,355	79,807	55,612
Other States ³	17	355	440,541	1,091,379	2,026,819	935,440

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.³ Percent not computed where base is less than 100.⁴ Colorado, 1 establishment; Georgia, 1; Kansas, 1; Minnesota, 1; Ohio, 6; Oklahoma, 1; Oregon, 2; Rhode Island, 1; Utah, 1; Wisconsin, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures]

	Average number em- ployed during year	NUMBER REPORTED FOR--											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	2,938	3,029	3,012	3,023	3,071	3,014	2,989	3,064	3,028	2,811	2,744	<i>2,726</i>	2,747
1929.....	5,842	5,791	5,973	6,051	6,503	6,382	6,153	5,996	5,808	5,778	5,447	5,117	<i>5,107</i>
1925.....	5,897	5,485	5,607	5,843	5,952	6,032	5,878	5,879	5,934	5,997	5,898	6,157	6,103
1919.....	8,981	8,527	8,637	8,757	8,591	8,504	9,052	9,046	9,224	9,389	9,239	9,295	9,611
1914.....	3,703	3,584	3,566	3,790	3,818	3,806	3,682	3,528	3,597	3,862	3,639	3,715	3,849
1909.....	3,196	<i>2,961</i>	3,170	3,156	2,987	3,010	3,025	3,209	3,199	3,075	<i>3,343</i>	3,507	3,704
<i>States, 1931</i>													
California.....	136	132	134	143	143	146	148	147	140	135	<i>122</i>	<i>122</i>	<i>122</i>
Connecticut.....	156	163	182	155	186	159	139	154	151	<i>129</i>	137	162	161
Illinois.....	346	337	341	333	350	360	363	345	337	341	348	335	<i>326</i>
Indiana.....	111	113	106	121	126	132	121	117	107	<i>84</i>	102	96	100
Massachusetts.....	30	30	30	30	30	31	31	30	29	31	31	29	30
Michigan.....	593	615	613	621	608	593	593	578	591	<i>574</i>	576	575	577
Missouri.....	98	96	99	99	103	102	103	98	103	90	95	90	<i>85</i>
New Jersey.....	45	<i>43</i>	44	45	46	46	45	44	<i>43</i>	44	46	48	<i>43</i>
New York.....	135	133	139	139	135	136	133	<i>131</i>	133	<i>131</i>	138	135	133
Pennsylvania.....	894	945	936	897	903	840	865	978	989	834	847	<i>818</i>	879
Texas.....	19	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>	<i>18</i>	19	19	19	19	19	19	19
Washington.....	20	19	19	19	20	21	21	22	22	20	19	19	<i>17</i>

TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1927 TO 1931

[The figures for 1931 and 1927 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers]

CLASS	1931	1929	1927
1. "Springs, steel, except wire, not made in plants operated in connection with rolling mills" industry, all products, value.	\$15,157,727	\$46,672,319	\$43,820,033
2. Steel springs, except wire, made in the industry.....	13,667,133	35,848,287	36,915,181
3. Other products, not normally belonging to the industry.....	1,490,594	10,824,032	6,905,462
4. Steel springs, except wire, made as secondary products in other industries (including those made in plants operated in connection with rolling mills).....	6,914,893	14,450,588	8,061,951
Steel springs, except wire, made in all industries, total (sum of 2 and 4) ¹	\$20,582,026	\$50,208,875	\$44,977,132
Leaf springs for railroad equipment, motor vehicles, carriages, wagons, etc.: Quantity reported: Tons (2,000 lbs.).....	106,596	301,308	} (2)
Value.....	\$12,245,100	\$33,738,915	
Quantity not reported, value.....	\$6,736,355	\$10,169,830	} (2)
Hot-wound springs (railroad): Quantity reported: Tons (2,000 lbs.).....	17,328	72,939	
Value.....	\$1,510,324	\$6,276,641	} (2)
Quantity not reported, value.....	\$90,247	\$123,469	

¹ For production of wire springs, see table 5, p. 868, of the report for Wire Drawn From Purchased Rods.² No comparable data.

TABLE 4.—PRODUCTS, BY CLASS AND VALUE, BY STATES: 1931

CLASS AND STATE	Number of establishments	Value
Steel springs, except wire: Total value.....		\$20,582,026
Leaf springs for railroad equipment, motor vehicles, carriages, wagons, etc., total.....	105	18,981,455
California.....	12	557,455
Connecticut and Massachusetts.....	5	353,832
Illinois.....	10	1,790,684
Indiana.....	4	650,604
Michigan.....	6	8,168,354
Missouri.....	5	439,388
New Jersey and New York.....	18	2,547,594
Ohio and Pennsylvania.....	25	3,816,245
Other States.....	20	657,399
Hot-wound springs (railway).....	17	1,600,571
New York and Pennsylvania.....	9	1,272,899
Other States.....	8	327,672

STEEL BARRELS, KEGS, AND DRUMS

Description of the industry.—The establishments classified in this industry are engaged primarily in the manufacture of steel barrels, kegs, and drums for use as shipping containers.

SUMMARY FOR THE UNITED STATES, 1919 TO 1931, AND FOR STATES, 1931

[Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Two of the "Other States," namely, California and Illinois, are, however, more important in the industry than Pennsylvania]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	52	3,253	\$3,512,096	\$12,989,820	³ \$21,644,288	\$8,654,468
1929.....	53	4,110	5,769,097	21,946,559	37,825,027	15,878,468
1927.....	39	2,853	3,985,629	14,735,518	24,104,669	9,369,161
1925.....	33	2,021	2,614,381	12,743,280	19,028,094	7,184,814
1923.....	39	2,668	3,363,374	14,818,038	23,248,707	8,430,669
1921.....	31	2,013	2,322,503	9,206,744	14,525,010	5,258,266
1919 ⁴	33	3,322	4,435,444	15,151,210	24,942,650	9,791,440
Percent of increase or decrease (—):						
1929-31.....	(4)	-20.9	-30.1	-40.8	-42.8	-45.5
1927-29.....	(4)	44.1	44.7	48.9	53.9	69.5
1925-27.....	(4)	41.2	36.8	15.6	21.0	30.4
1923-25.....	(4)	-24.3	-13.3	-14.0	-14.3	-14.8
1921-23.....	(4)	32.5	44.8	59.9	60.1	60.3
1919-21.....	(4)	-39.4	-47.6	-38.8	-41.8	-46.3
1921-31.....	(4)	61.6	51.2	40.2	49.0	64.6
1919-29.....	(4)	23.7	30.1	44.9	51.6	62.2
<i>States, 1931</i>						
New Jersey.....	3	169	\$217,854	\$703,522	\$1,114,453	\$410,931
New York.....	4	155	271,311	731,311	1,206,655	475,344
Ohio.....	14	907	950,688	3,656,514	5,922,522	2,206,008
Pennsylvania.....	7	226	262,307	1,329,432	1,925,605	596,203
Texas.....	3	152	153,980	993,430	1,512,708	519,278
Other States ⁵	21	1,555	1,656,596	5,575,611	9,962,255	4,386,644

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Includes \$2,074,008, value of miscellaneous products, not normally belonging to this industry, made as secondary products by establishments engaged primarily in the manufacture of steel barrels, kegs, and drums. Does not include value of steel barrels, kegs, and drums made as secondary products by establishments classified in other industries. The total value of steel barrels, kegs, and drums manufactured in 1931, so far as separately reported, regardless of the industry classification of the establishments in which they were manufactured, was \$22,059,601.

⁴ No comparable figures for earlier years can be given.

⁵ Percent not computed where base is less than 100.

⁶ Alabama, 1 establishment; California, 4; Illinois, 4; Indiana, 1; Louisiana, 2; Maryland, 1; Minnesota, 4; Missouri, 3; Wisconsin, 1.

STEEL-WORKS AND ROLLING-MILL PRODUCTS

[A preliminary report for this industry was issued under date of December 7, 1932]

Description of the industry.—This industry consists in the conversion of pig iron and scrap into steel and the rolling of iron and steel. In many cases the processes of conversion and rolling are performed in the same plants, and in such cases the value of products represents only the finished products. Some steel plants, however, produce crude steel or partly rolled steel, which is used as a material by other steel plants, and this causes some degree of duplication in the figures for value of products and cost of materials.

The amount of duplication in the total value of products for the industry cannot be accurately determined, but it is equal to the sum of the major part of the value (\$164,726,779) of the ingots and semifinished rolled products (except for forgings) made for sale and for transfer to other plants under the same ownership and a considerable but indeterminable part of the value (\$53,655,582) of the "interplant transfers" of direct steel castings, forgings, and finished rolled products made in certain plants and transferred to other plants under the same ownership for use as materials in further manufacture. All but a small portion of the ingots and semifinished rolled products manufactured for sale and for interplant transfer, and to a large extent the steel castings, forgings, and finished rolled products transferred to other plants, are used as materials within the industry, and therefore their values as finished products are again included in the total value of products. The tonnage produced and consumed in different departments of the same plant does not carry an assigned value, so no duplication arises from this source.

In many establishments the manufacturing processes are carried beyond the rolling stage. For example: Tin-dipping departments are operated by some of the black-plate rolling mills, wire-drawing departments by wire-rod mills, and pipe-and-tube departments by skelp mills. For this reason the industry overlaps a number of others, and the products include certain commodities identical in character with the primary products of other industries. (See table, p. 861; table 4, p. 866; and table 5, p. 836.)

A large part of the pig iron used as a material by steel works is delivered, mostly in a molten state, by blast furnaces operated in conjunction with the steel works. (See "Relation of Blast Furnace Products and Steel Works and Rolling Mill Products industries," p. 785.)

Detailed statistics of products.—Statistics relating to individual products or classes of products are given in tables 4 to 10, inclusive, arranged, in table 4, under eight general headings, namely: Unrolled steel; semifinished rolled products; finished rolled products and forg-

ings; scrap iron and steel; cinder and scale; miscellaneous products other than iron or steel; custom work and repairing; and products further manufactured from finished rolling-mill and foundry products.

Table 4 has been prepared in such form as to show separately the tonnage produced and consumed in the same works, the tonnage produced and transferred to other plants under the same ownership, and the tonnage produced for sale. The tonnage transferred to other plants under the same ownership carries an assigned value, but no value is assigned to the tonnage produced and consumed in different departments of the same works.

In many cases rolling mills operate departments for the conversion of rolling-mill products into pipes and tubes, bolts and nuts, cut nails and spikes, and other finished iron and steel products. These products when manufactured in plants other than departments of rolling mills are classified in other industries. The total output of these products, by kind, quantity, and value, as reported for all industries, is shown, so far as practicable, in table 5, p. 836.

Tin plate and terneplate are manufactured almost exclusively and wire and wire products are made to a considerable extent in departments operated in connection with rolling mills. Statistics showing the total output of these commodities will be found in separate sections of this report. (See Tin Plate and Terneplate, p. 861, and Wire, p. 864.)

Steel castings.—Steel foundries are classified for census purposes in the Steel Works and Rolling Mill Products and the Foundry and Machine Shop Products industries, according to the character of their chief products. The data for wage earners, wages, and cost of materials, fuel, and purchased electric energy for the casting departments of steel works and of iron foundries and machine shops are included in the respective items for the establishments as a whole and cannot be segregated. Table 6 shows the production of steel castings by States. The data for production and consumption in further manufacture in the same works are substantially complete for the classes of establishments covered by this table, but do not include data for certain establishments in other industries—for example, those engaged in the manufacture of motor vehicles, engines, pumps, and agricultural implements—which are not required to report such production and consumption to the Bureau of the Census. The total production as given in this report does not, therefore, represent the entire production of steel castings in all industries, but it does cover with substantial completeness the production made for sale or interplant transfer.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy ¹	Value of products	Value added by manufacture ²
<i>United States</i>						
1931-----	446	264,034	\$338,386,533	\$831,883,897	\$1,402,843,188	\$570,959,291
1929-----	486	394,574	689,015,541	1,904,083,157	3,365,788,805	1,461,705,048
1927-----	486	361,312	601,275,499	1,689,655,295	2,779,840,238	1,090,184,943
1925-----	473	370,726	614,984,982	1,811,961,218	2,946,008,231	1,134,107,013
1923-----	489	388,201	637,825,137	2,044,398,238	3,154,324,671	1,109,926,433
1921-----	494	235,515	324,987,239	1,005,125,454	1,481,659,352	476,533,898
1919-----	500	375,088	637,637,430	1,680,575,758	2,828,902,376	1,148,326,618
1914-----	427	248,716	188,142,393	590,825,692	918,664,565	327,838,873
1909-----	446	240,076	163,200,758	657,500,850	985,722,534	328,221,678
1904-----	415	207,562	122,491,993	441,204,432	673,965,026	232,760,594
1899-----	445	183,249	102,335,876	390,895,277	597,211,716	206,316,439
<i>Percent of increase or decrease (-):</i>						
1929-31-----	-8.2	-32.9	-50.9	-56.3	-58.3	-60.9
1927-29-----	-----	9.2	14.6	12.7	21.1	34.1
1925-27-----	2.7	-2.5	-2.2	-6.7	-5.6	-3.9
1923-25-----	-3.3	-4.5	-3.6	-11.4	-6.6	2.2
1921-23-----	-1.0	64.8	96.3	103.4	112.9	132.9
1919-21-----	-1.2	-37.2	-49.0	-40.2	-47.6	-58.5
1921-31-----	-9.7	12.4	4.1	-17.2	-5.3	19.8
1919-29-----	-2.8	5.2	8.1	13.3	19.0	27.3
1909-19-----	12.1	60.2	290.7	155.6	187.0	240.0
1899-1909-----	0.2	31.0	59.5	68.2	65.1	59.1
<i>States, 1931</i>						
California-----	19	4,510	\$5,085,857	\$7,850,680	\$15,685,148	\$7,834,468
Illinois-----	37	19,079	23,678,934	65,259,720	109,653,769	41,384,049
Indiana-----	18	18,641	28,343,905	87,072,573	137,994,661	50,922,088
Iowa-----	3	120	120,607	110,310	279,330	169,020
Kentucky-----	4	3,459	3,634,832	11,875,190	19,535,059	7,659,869
Michigan-----	16	5,249	7,883,360	16,235,145	30,144,260	13,909,115
Missouri-----	8	2,336	2,731,380	4,321,112	9,481,686	5,160,574
New Jersey-----	12	5,499	6,746,421	12,699,552	23,061,772	10,362,220
New York-----	24	10,175	14,145,060	30,585,495	54,916,225	24,330,730
Ohio-----	74	58,088	74,593,573	206,081,705	325,846,919	119,764,214
Oregon-----	3	175	201,884	151,272	592,391	441,119
Pennsylvania-----	146	98,332	122,100,471	293,123,309	483,335,395	190,212,086
West Virginia-----	14	9,830	14,542,263	26,335,093	56,364,015	30,028,922
Wisconsin-----	15	3,062	3,303,170	5,015,841	10,879,736	5,863,895
Other States ³ -----	53	26,089	31,294,816	65,156,900	128,073,822	62,916,922

¹ Includes cost of foundry supplies for all years except 1929; the schedule for 1929 directed manufacturers to omit this item.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Alabama, 8 establishments; Colorado, 3; Connecticut, 3; Delaware, 3; Georgia, 2; Louisiana, 1; Maine, 1; Maryland, 4; Massachusetts, 9; Minnesota, 4; Oklahoma, 2; Rhode Island, 1; Tennessee, 2; Texas, 2; Utah, 1; Virginia, 2; and Washington, 5.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
U.S.													
1931	264, 634	294, 478	299, 624	308, 079	302, 801	291, 459	268, 652	257, 435	242, 182	233, 027	230, 196	224, 109	<i>223, 565</i>
1929	394, 574	385, 670	391, 303	400, 296	407, 307	413, 918	410, 441	410, 802	410, 763	398, 113	391, 183	364, 844	<i>350, 189</i>
1925	370, 726	380, 453	382, 285	385, 354	374, 872	366, 824	360, 397	<i>354, 053</i>	354, 567	363, 605	369, 680	375, 029	381, 094
1919	375, 088	441, 580	416, 541	392, 803	367, 514	354, 721	360, 584	383, 212	387, 965	377, 275	<i>292, 469</i>	343, 312	383, 100
1914	248, 716	257, 651	262, 418	271, 531	270, 941	254, 443	254, 827	252, 680	247, 953	249, 635	233, 338	<i>210, 279</i>	218, 896
1909	240, 076	216, 349	215, 650	<i>215, 076</i>	217, 307	218, 424	235, 533	234, 151	242, 077	258, 925	269, 255	274, 525	283, 629
States, 1931													
Calif.	4, 510	5, 141	5, 046	5, 021	5, 027	4, 850	4, 446	4, 356	4, 273	4, 153	4, 006	3, 916	<i>3, 832</i>
Ill.	19, 079	21, 626	22, 250	23, 337	22, 314	21, 846	18, 775	17, 980	17, 018	16, 320	15, 777	<i>15, 583</i>	16, 118
Ind.	18, 641	21, 948	22, 327	24, 756	22, 731	21, 198	18, 575	17, 859	16, 617	14, 871	14, 701	14, 369	<i>13, 735</i>
Iowa	120	130	129	131	130	128	119	117	119	115	97	125	<i>90</i>
Ky.	3, 459	<i>3, 628</i>	3, 459	3, 555	3, 559	3, 469	3, 507	3, 440	3, 442	3, 424	3, 391	3, 310	<i>3, 285</i>
Mich.	5, 249	5, 585	5, 889	6, 700	7, 285	7, 006	6, 535	4, 701	3, 556	3, 554	3, 969	3, 284	4, 823
Mo.	2, 336	2, 155	2, 374	2, 444	2, 800	2, 711	2, 580	2, 477	2, 173	2, 324	2, 030	2, 044	<i>1, 927</i>
N.J.	5, 499	6, 881	5, 934	5, 792	5, 757	5, 585	5, 517	5, 551	5, 384	4, 798	5, 308	5, 072	5, 308
N.Y.	10, 173	10, 736	11, 173	11, 428	11, 226	11, 600	10, 600	9, 642	9, 598	9, 383	8, 883	<i>8, 860</i>	8, 963
Ohio	58, 088	64, 093	66, 002	68, 543	67, 391	65, 689	60, 226	56, 068	52, 515	49, 287	50, 118	48, 476	<i>48, 073</i>
Oreg.	175	<i>156</i>	160	166	191	193	186	185	178	174	175	173	165
Pa.	98, 332	110, 565	111, 562	113, 349	112, 003	105, 782	98, 468	94, 862	89, 324	89, 535	86, 349	85, 223	<i>82, 957</i>
W.Va.	9, 830	10, 422	10, 953	10, 840	10, 395	10, 434	10, 232	10, 204	9, 419	<i>8, 416</i>	8, 619	8, 635	9, 388
Wis.	3, 032	3, 179	3, 281	3, 519	3, 322	3, 382	3, 190	3, 076	2, 880	2, 863	2, 635	2, 686	<i>2, 463</i>

TABLE 3.—NUMBER OF ESTABLISHMENTS AND VALUE OF PRODUCTS, BY CLASS OF ESTABLISHMENTS, FOR THE UNITED STATES, 1927-31, AND FOR STATES, 1931

STATE AND CENSUS YEAR	Total	Establishments engaged both in producing steel and in rolling iron and steel	Establishments engaged in producing steel but not in rolling	Establishments engaged in rolling iron and steel but not in producing steel	PERCENT OF TOTAL		
					Steel-works and rolling mills	Steel-works only	Rolling mills only
United States:							
Establishments:							
1931	446	118	163	165	26.5	36.5	37.0
1929	486	124	172	190	25.5	35.4	39.1
1927	486	134	158	194	27.6	32.5	39.9
Value of products:							
1931	\$1, 402, 843, 188	\$947, 902, 370	\$75, 651, 209	\$379, 289, 609	67.6	5.4	27.0
1929	3, 365, 788, 805	2, 302, 211, 836	217, 343, 402	846, 233, 567	68.4	6.5	25.1
1927	2, 779, 840, 238	1, 855, 925, 744	164, 780, 124	759, 128, 370	66.8	5.9	27.3
Pennsylvania:							
Establishments	146	41	65	65	28.1	27.4	44.5
Value of products	\$483, 335, 395	\$314, 623, 705	\$28, 534, 263	\$140, 177, 427	65.1	5.9	29.0
Ohio:							
Establishments	74	22	19	33	29.7	25.7	44.6
Value of products	\$325, 845, 919	\$225, 680, 437	\$8, 432, 628	\$91, 732, 854	69.3	2.6	28.2
Indiana:							
Establishments	18	5	4	9	27.8	22.2	50.0
Value of products	\$137, 094, 661	\$87, 732, 485	\$4, 186, 608	\$46, 075, 568	63.6	3.0	33.4
Illinois:							
Establishments	37	9	15	13	24.3	40.5	35.1
Value of products	\$106, 653, 760	\$63, 969, 444	\$10, 645, 077	\$32, 030, 248	60.0	10.0	30.0
New York:							
Establishments	24	9	7	8	37.5	29.2	33.3
Value of products	\$54, 916, 225	\$42, 426, 555	\$3, 481, 818	\$0, 007, 852	77.3	6.3	16.4
Other States:							
Establishments	147	32	78	37	21.8	53.1	25.2
Value of products	\$294, 097, 219	\$213, 469, 744	\$20, 370, 815	\$80, 256, 660	72.6	6.9	20.5

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927

[See "Description of the industry," p. 827, second paragraph, in regard to duplication in total value of products]

[Ton, 2,240 lbs.]

KIND	1931	1929	1927
Total value.....	\$1,402,843,188	\$3,365,788,805	\$2,779,840,238
Unrolled steel, total tons ¹	25,895,640	56,160,683	44,756,716
Ingots, total tons.....	25,436,339	54,793,683	43,773,763
For sale:			
Tons.....	50,680	195,634	128,835
Value.....	\$1,687,923	\$6,230,183	\$4,110,340
Transferred for consumption in other plants of same company:			
Tons.....	192,660	465,309	308,052
Assigned value.....	\$3,860,568	\$10,910,385	\$8,568,902
Produced and consumed in same works, tons.....	25,192,999	54,132,740	43,336,876
Direct steel castings, total tons.....	1459,301	1,367,000	982,953
For sale:			
Tons.....	1352,437	1,158,823	823,069
Value.....	\$57,153,225	\$183,480,786	\$136,350,291
Transferred for consumption in other plants of same company:			
Tons.....	18,116	52,952	65,150
Assigned value.....	\$2,403,456	\$7,916,915	\$8,734,901
Produced and consumed in same works, tons.....	188,748	155,225	94,714
Semifinished rolled products, total tons.....	23,584,587	48,528,607	38,258,016
For sale:			
Tons.....	2,728,266	6,714,525	5,217,381
Value.....	\$81,521,225	\$235,550,793	\$181,141,261
Transferred for consumption in other plants of same company:			
Tons.....	2,904,488	6,004,635	5,089,926
Assigned value.....	\$80,151,350	\$185,776,910	\$164,909,994
Produced and consumed in same works, tons.....	17,951,833	35,749,447	27,950,709
Blooms, billets, and slabs, except for forging, total tons ²	18,724,175	38,819,107	30,491,273
For sale:			
Tons.....	871,887	2,727,604	2,076,770
Value.....	\$27,545,558	\$100,373,379	\$73,653,962
Transferred for consumption in other plants of same company:			
Tons.....	2,235,427	4,633,624	4,065,101
Value.....	\$63,564,140	\$144,418,740	\$132,254,237
Produced and consumed in same works, tons.....	15,616,861	31,457,879	24,329,402
Rolled blooms and billets for forging, total tons.....	172,946	657,808	274,186
For sale and interplant transfer:			
Tons.....	69,398	269,675	112,790
Value.....	\$2,494,287	\$10,326,582	\$4,689,581
Produced and consumed in same works, tons.....	103,548	388,133	161,396
Sheet and tin-plate bars, total tons.....	4,564,915	8,710,921	7,120,666
For sale:			
Tons.....	1,791,833	3,751,311	3,036,281
Value.....	\$51,548,862	\$125,657,607	\$102,962,937
Transferred for consumption in other plants of same company:			
Tons.....	647,265	1,310,421	948,937
Assigned value.....	\$15,741,618	\$30,658,608	\$30,130,804
Produced and consumed in same works, tons.....	2,125,817	3,649,189	3,135,468
Muck and scrap bar, total tons.....	122,551	340,771	371,891
For sale and interplant transfer:			
Tons.....	16,944	86,525	47,448
Value.....	\$778,110	\$3,892,607	\$2,359,464
Produced and consumed in same works, tons.....	105,607	254,246	324,443

See footnotes at end of table.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927—Continued

[See note at head of table.]

KIND	1931	1929	1927
Finished rolled products and forgings, total tons ¹	18,396,161	30,882,941	32,154,094
For sale:			
Tons.....	11,899,187	27,261,088	21,388,659
Value.....	\$563,647,141	\$1,451,841,437	\$1,132,645,597
Transferred for consumption in other plants of same company:			
Tons.....	1,298,423	3,088,283	2,349,819
Assigned value.....	\$51,252,126	\$152,991,522	\$119,142,564
Produced and consumed in same works, tons.....	5,198,551	9,532,670	8,415,616
Rails, total tons.....	1,141,494	2,692,010	2,715,792
Number of establishments.....	14	17	16
For sale and interplant transfer:			
Tons.....	1,130,069	2,666,208	2,703,144
Value.....	\$48,196,793	\$113,924,599	\$114,565,408
Produced and consumed in same works, tons.....	11,425	25,808	12,648
Reroiled or renewed rails (not including rails reroiled by makers of ingots from new seconds, defective new rails, etc.), total tons.....	(²)	72,087	90,966
Number of establishments.....	3	7	8
For sale and interplant transfer:			
Tons.....	(²)	56,830	88,467
Value.....	(²)	\$1,932,790	\$3,103,380
Produced and consumed in same works, tons.....	(²)	15,257	2,500
Rail joints and fastenings, tie-plates, etc., total tons.....	383,705	877,066	893,342
Number of establishments.....	27	30	29
For sale and interplant transfer:			
Tons.....	379,288	872,349	892,903
Value.....	\$19,095,688	\$47,760,823	\$50,394,036
Produced and consumed in same works, tons.....	4,417	4,717	439
Structural shapes (not assembled or fabricated), total tons.....	2,048,693	4,620,234	3,711,708
Number of establishments.....	49	42	42
Heavy (leg or web 3 inches and over):			
For sale:			
Tons.....	1,479,206	3,650,028	2,809,375
Value.....	\$52,538,455	\$152,547,908	\$116,694,833
Transferred for consumption in other plants of same company:			
Tons.....	202,749	211,809	152,530
Assigned value.....	\$7,334,730	\$9,013,734	\$6,272,331
Light (leg or web less than 3 inches):			
For sale:			
Tons.....	282,416	576,308	531,889
Value.....	\$11,102,613	\$26,124,071	\$25,031,707
Transferred for consumption in other plants of same company:			
Tons.....	20,224	31,817	8,420
Assigned value.....	\$692,433	\$1,211,978	\$339,738
Heavy and light produced and consumed in same works, tons.....	64,098	156,272	200,488
Concrete-reinforcing bars (including twisted bars):			
Number of establishments.....	55	57	53
For sale and interplant transfer:			
Tons.....	617,429	972,053	782,671
Value.....	\$23,081,083	\$42,416,829	\$35,400,930
Merchant bars, mill shafting, etc., total tons.....	2,569,576	6,874,440	4,847,463
Number of establishments.....	107	120	122
Steel bars, total tons.....	2,515,723	6,676,166	4,629,187
Open-hearth or Bessemer:			
For sale:			
Tons.....	2,037,143	5,082,380	3,835,265
Value.....	\$87,848,330	\$252,121,971	\$189,962,216

See footnotes at end of table.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927—Continued

[See note at head of table.]

KIND	1931	1929	1927
Finished rolled products and forgings—Continued.			
Merchant bars, mill shafting, etc.—Continued.			
Steel bars—Continued.			
Open-hearth or Bessemer—Continued.			
Transferred for consumption in other plants of same company:			
Tons.....	129,753	984,803	330,585
Assigned value.....	\$5,364,389	\$53,188,755	\$19,187,326
Electric-steel bars:			
For sale and interplant transfer:			
Tons.....	62,559	156,354	76,219
Value.....	\$17,783,865	\$51,075,895	\$27,505,901
Crucible-steel bars:			
For sale and interplant transfer:			
Tons.....	1,647	4,637	6,918
Value.....	\$640,166	\$2,214,192	\$3,413,182
Produced and consumed in same works (open-hearth, Bessemer, electric-steel, and crucible-steel bars), tons.....	284,621	447,992	350,200
Iron bars (merchant, etc.), total tons.....	54,853	198,274	218,276
For sale:			
Tons.....	47,189	163,710	188,889
Value.....	\$3,486,187	\$12,235,809	\$12,899,455
Transferred for consumption in other plants of same company:			
Tons.....	5,404	23,366	12,698
Assigned value.....	\$209,695	\$1,048,044	\$682,854
Produced and consumed in same works, tons.....	1,260	11,198	16,698
Wire rods, total tons.....	1,845,135	3,151,858	2,859,223
Number of establishments.....	47	48	50
For sale:			
Tons.....	437,311	783,052	644,227
Value.....	\$15,479,319	\$33,045,170	\$28,888,668
Transferred for consumption in other plants of same company:			
Tons.....	212,764	372,130	379,961
Assigned value.....	\$7,940,935	\$15,995,928	\$17,170,111
Produced and consumed in same works, tons.....	1,195,060	1,996,676	1,835,035
Bolt and nut rods and spike and chain rods, total tons.....	179,538	433,283	348,042
Number of establishments.....	27	30	24
For sale and interplant transfer:			
Tons.....	19,842	120,980	94,803
Value.....	\$842,686	\$5,683,340	\$4,380,637
Bolt and nut rods: Produced and consumed in same works, tons.....	87,901	155,417	253,239
Spike and chain rods: Produced and consumed in same works, tons.....	71,795	156,886	
Plates (No. 12 and thicker), not coated, total tons.....	2,046,426	5,284,879	3,863,684
Number of establishments.....	56	60	66
Crucible and electric plate steel and saw plates, for sale and interplant transfer:			
Tons.....	3,448	4,131	5,068
Value.....	\$971,416	\$1,654,927	\$1,762,837
Boiler plate, etc., not elsewhere specified, total tons.....	2,042,978	5,280,748	3,858,616
For sale:			
Tons.....	1,896,069	5,094,309	3,670,427
Value.....	\$72,002,102	\$221,562,771	\$158,366,727
Transferred for consumption in other plants of same company:			
Tons.....	86,656	120,509	105,971
Assigned value.....	\$2,879,523	\$4,988,482	\$4,383,533
Produced and consumed in same works, tons.....	60,253	65,930	82,218

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927—Continued

[See note at head of table]

KIND	1931	1929	1927
Finished rolled products and forgings—Continued.			
Sheets (No. 13 and thinner), not coated, total tons.....	4, 171, 262	7, 284, 005	5, 759, 949
Number of establishments.....	88	92	96
Automobile-body, for sale and interplant transfer:			
Tons.....	418, 409	1, 163, 772	618, 172
Value.....	\$29, 186, 173	\$109, 104, 266	\$58, 411, 679
Black for tinning (tin-mill black plate):			
For sale and interplant transfer:			
Tons.....	114, 034	143, 200	59, 313
Value.....	\$7, 651, 763	\$10, 179, 155	\$4, 381, 146
Produced and consumed in same works, tons.....	1, 351, 970	1, 827, 193	1, 627, 866
Plain:			
For sale and interplant transfer:			
Tons.....	1, 488, 683	2, 734, 077	2, 304, 692
Value.....	\$89, 082, 341	\$187, 052, 840	\$164, 889, 847
Produced and consumed in same works, tons.....	798, 076	1, 416, 663	1, 149, 906
Skelp, total tons.....	1, 472, 213	3, 558, 060	3, 502, 902
Number of establishments.....	34	39	40
For sale:			
Tons.....	306, 568	654, 721	541, 753
Value.....	\$10, 412, 935	\$25, 414, 922	\$21, 696, 045
Transferred for consumption in other plants of same company:			
Tons.....	312, 733	616, 634	699, 222
Assigned value.....	\$10, 906, 937	\$24, 706, 274	\$28, 908, 481
Produced and consumed in same works, tons.....	852, 912	2, 280, 695	2, 261, 927
Cotton ties:			
Number of establishments.....	4	5	6
For sale:			
Tons.....	47, 551	38, 216	42, 800
Value.....	\$1, 931, 934	\$1, 842, 250	\$2, 230, 148
Hoops, bands, and strips, total tons.....	1, 402, 820	2, 726, 171	1, 685, 836
Number of establishments.....	47	44	41
Hot-rolled strips and flats for cold rolling (less than 24 inches in width):			
For sale:			
Tons.....	402, 437	381, 859	
Value.....	\$18, 062, 479	\$16, 087, 505	
Transferred for consumption in other plants of same company:			
Tons.....		96, 799	1, 222, 364
Assigned value.....		\$4, 659, 018	\$64, 121, 036
Other hoops, bands, and strips:			
For sale:			
Tons.....	592, 866	1, 456, 929	
Value.....	\$27, 123, 101	\$70, 201, 164	
Transferred for consumption in other plants of same company:			
Tons.....	64, 671	70, 873	
Assigned value.....	\$2, 720, 612	\$3, 583, 073	
Hot-rolled strips for cold rolling, produced and consumed in same works, tons.....	280, 523	583, 502	463, 472
Other hoops, bands, and strips, produced and consumed in same works, tons.....	62, 323	136, 209	
Nail and tack plate, ⁹ produced and consumed in same works, tons.....	(⁹)	8, 198	18, 243
Axles, rolled or forged:			
Number of establishments.....	10	11	9
For sale and interplant transfer:			
Tons.....	26, 894	150, 448	119, 203
Value.....	\$2, 238, 631	\$12, 038, 622	\$10, 736, 789
Car and locomotive wheels, rolled or forged:			
Number of establishments.....	8	8	8
For sale and interplant transfer:			
Tons.....	84, 405	209, 182	155, 030
Value.....	\$7, 689, 367	\$19, 352, 111	\$15, 196, 895

See footnotes at end of table.

TABLE 4.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927—Continued

[See note at head of table]

KIND	1931	1929	1927
Finished rolled products and forgings—Continued.			
Armor plate and ordnance:			
Number of establishments.....	5	6	6
For sale:			
Tons.....	17, 212	9, 939	7, 746
Value.....	\$6, 184, 386	\$3, 287, 261	\$2, 613, 530
Sheet piling, plain:			
Number of establishments.....	3		
For sale and interplant transfer:			
Tons.....	63, 270	(?)	(?)
Value.....	\$2, 525, 644		
Rolled and forged iron and steel products, not elsewhere specified, total tons.....	278, 532	913, 916	749, 494
For sale: ⁶			
Tons.....	167, 591	534, 410	407, 134
Value.....	\$19, 059, 587	\$57, 482, 580	\$42, 023, 422
Transferred for consumption in other plants of same company: ⁶			
Tons.....	39, 024	141, 440	240, 632
Assigned value.....	\$2, 634, 019	\$8, 862, 992	\$15, 764, 333
Produced and consumed in same works, tons.....	71, 917	238, 057	101, 728
Scrap iron and steel, total tons.....	8, 305, 174	16, 818, 460	13, 262, 602
For sale:			
Tons.....	850, 290	1, 871, 891	1, 612, 287
Value.....	\$10, 450, 074	\$28, 894, 147	\$23, 961, 710
Transferred for consumption in other plants of same company:			
Tons.....	558, 644	958, 170	835, 937
Assigned value.....	\$6, 194, 577	\$13, 207, 281	\$11, 787, 893
Produced and consumed in same works, tons.....	6, 896, 240	13, 988, 399	10, 814, 378
Cinder and scale, total tons.....	1, 508, 525	3, 340, 568	2, 411, 486
For sale:			
Tons.....	217, 162	432, 010	328, 240
Value.....	\$509, 088	\$1, 163, 744	\$962, 789
Transferred for consumption in other plants of same company:			
Tons.....	403, 300	762, 322	328, 311
Assigned value.....	\$799, 308	\$1, 567, 313	\$906, 458
Produced and consumed in same works, tons.....	888, 063	2, 146, 236	1, 754, 935
Miscellaneous products, other than iron and steel, value.	\$1, 093, 508	\$3, 131, 999	\$1, 550, 573
Receipts for custom work and repairing.....	\$1, 360, 803	\$3, 110, 875	\$1, 900, 410
Value of further manufactured products made in departments operated in connection with steel works and rolling mills from finished rolling-mill and foundry products ¹	\$539, 858, 816	\$1, 080, 005, 515	\$983, 166, 555

¹ In addition, 13,916 tons of steel castings, valued at \$2,578,080, were produced in 1931 for sale by establishments classified in other industries, and 13,210 tons were reported as produced and consumed in the same works in further manufacture by establishments in the "Foundry and Machine Shop Products Not Elsewhere Classified" industry. Steel castings are also produced and consumed in further manufacture to some extent in other industries, but no data in regard to such production are collected.

² See table 8, p. 841, for distribution by process.

³ Includes data for very small quantities (amounting to less than one-tenth of 1 percent of the totals) of hammered charcoal billets, etc., which can not be shown separately without disclosing approximations of data for individual establishments.

⁴ Does not include tonnage of rolled billets and blanks for seamless tubes, nor tonnage, for sale, of rolled blooms and billets for forging.

⁵ Not shown separately to avoid disclosing approximations of the output of individual establishments; included in item for "Rolled and forged iron and steel products, not elsewhere specified."

⁶ "For sale" and "Transferred for consumption in other plants of same company" tonnages and values of nail and tack plate are included in items for "Rolled and forged iron and steel products, not elsewhere specified," to avoid disclosing approximations of production reported by individual establishments.

⁷ Not reported separately; included in item for "Rolled and forged iron and steel products, not elsewhere specified."

⁸ Tin plate and terneplate (see table, p. 861); wire and wire products (see tables 4 and 5, pp. 866 and 868); wrought pipes and tubes; bolts, nuts, washers, and rivets; cut nails and spikes; galvanized plates and sheets; corrugated sheets; cold-rolled strip steel, flat bright; cold-finished steel bars; horseshoes; railroad spikes; iron and steel rolls for rolling mills; and ball and roller bearings. (See table 5, p. 836.)

TABLE 5.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS, OTHER THAN TIN PLATE AND TERNEPLATE AND WIRE AND WIRE PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1931,¹ 1929, AND 1927

[The phrase "Made in Rolling Mill industry," as here used, refers to products manufactured in departments operated in connection with steel works and rolling mills. The 1931 and 1927 figures for all industries refer to production. The 1929 figures for products of the Rolling Mill industry refer to production, but those for products of other industries refer to sales (shipments or deliveries) by manufacturers]

[Ton, 2,240 pounds]

KIND	1931 ¹	1929	1927
Railroad spikes, all industries: ²			
Establishments.....	19	19	16
Kegs (200 pounds).....	829,620	1,857,105	1,866,904
Value.....	\$4,337,736	\$10,337,883	\$10,049,228
Bolts, nuts, rivets, washers, etc., all industries, total value.....	\$51,291,163	\$126,507,797	\$95,893,944
Made in Rolling Mill industry:			
Establishments.....	23	27	27
Value.....	\$9,922,353	\$18,890,021	\$17,000,407
Made in other industries:			
Establishments.....	185	185	158
Value.....	\$41,368,810	\$107,617,776	\$78,893,537
Railroad, boiler, bridge, and structural bolts, nuts, rivets, washers, etc.:			
Quantity reported:			
Kegs (200 pounds).....	1,815,154	2,722,569	
Value.....	\$18,339,373	\$27,332,037	
Quantity not reported, value.....	\$1,010,980	\$3,370,856	
Other bolts, nuts, rivets, washers, etc.:			
Quantity reported:			
Kegs (200 pounds).....	1,715,241	5,511,180	(³)
Value.....	\$19,584,570	\$74,094,110	
Quantity not reported, value.....	\$12,356,240	\$21,650,794	
Cut and wrought nails, spikes, and tacks, all industries, total value.....	\$5,059,805	\$7,503,760	\$7,897,873
Made in Rolling Mill industry (nails and spikes only):			
Establishments.....	4	4	6
Kegs (100 pounds).....	289,148	421,320	447,941
Value.....	\$758,115	\$1,170,720	\$1,385,556
Made in other industries:			
Establishments.....	30	29	28
Cut nails and spikes:			
Pounds.....	16,881,400	44,304,835	(³)
Value.....	\$1,505,945	\$5,200,198	\$4,915,707
Cut tacks:			
Pounds.....	25,236,567	\$2,290,599	
Value.....	\$2,290,599		
Horseshoe nails:			
Kegs (100 pounds).....	43,900	93,750	111,045
Value.....	\$502,146	\$1,132,842	\$1,599,610
Galvanized plates, sheets, and strips, all industries: ²			
Establishments.....	31	30	32
Plain:			
Tons.....	444,654	959,524	922,384
Value.....	\$31,429,894	\$77,566,887	\$80,812,593
Corrugated or crimped:			
Tons.....	262,307	300,423	235,652
Value.....	\$18,380,907	\$26,362,771	\$21,656,659
Corrugated or crimped sheets, not galvanized, made in Rolling Mill industry:			
Tons.....	3,020	5,285	5,893
Value.....	\$175,218	\$380,368	\$471,314
Wrought pipes and tubes, all industries, total value.....	\$200,224,982	\$455,276,528	\$397,753,830
Wrought welded:			
Boiler tubes, all industries: ²			
Establishments.....	7	7	8
Tons.....	16,939	40,628	45,119
Value.....	\$1,920,016	\$4,851,283	\$4,857,092
Oil-country casing, tubing, and pipe, made in Rolling Mill industry:			
Establishments.....	8	8	11
Tons.....	151,640	888,338	1,113,745
Value.....	\$9,822,102	\$61,707,710	\$88,463,823
Oil-country casing, tubing, and pipe, not made in Rolling Mill industry:			
Establishments.....	17	13	10
Tons.....	434,215	493,330	219,088
Value.....	\$33,172,356	\$39,652,352	\$19,180,479

See footnotes at end of table.

TABLE 5.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS, OTHER THAN TIN PLATE AND TERNEPLATE AND WIRE AND WIRE PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1931,¹ 1929, AND 1927—Continued

[See note at head of table]

KIND	1931 ¹	1929	1927
Wrought pipes and tubes, all industries—Continued.			
Wrought welded—Continued.			
Other black pipe, made in Rolling Mill industry:			
Establishments.....	17	⁶ 15	17
Tons.....	465, 115	⁶ 948, 065	945, 523
Value.....	\$32, 270, 539	⁶ \$72, 067, 952	\$74, 948, 435
Other black pipe, not made in Rolling Mill industry:			
Establishments.....	38	23	18
Tons.....	265, 866	531, 289	433, 706
Value.....	\$21, 679, 210	\$45, 172, 186	\$41, 719, 289
Galvanized pipe, made in Rolling Mill industry:			
Establishments.....	11	⁶ 11	11
Tons.....	192, 723	⁶ 402, 497	332, 275
Value.....	\$18, 019, 000	⁶ \$38, 768, 841	\$33, 694, 735
Galvanized pipe, not made in Rolling Mill industry:			
Establishments.....	13	8	10
Tons.....	116, 673	171, 929	158, 998
Value.....	\$11, 552, 418	\$19, 239, 584	\$18, 620, 417
Mechanical tubing, not made in Rolling Mill industry:			
Establishments.....	15	15	13
Quantity reported:			
Tons.....	28, 627	77, 178	39, 398
Value.....	\$4, 770, 907	\$11, 486, 952	\$9, 441, 560
Quantity not reported, value.....	\$575, 376	\$3, 147, 544	-----
Heavy-riveted and lock-joint, all industries, value ⁴	\$4, 022, 933	\$10, 252, 415	\$8, 255, 351
Seamless, made in Rolling Mill industry:			
Boiler tubes:			
Establishments.....	9	9	8
Tons.....	70, 784	185, 369	152, 104
Value.....	\$8, 594, 836	\$21, 723, 457	\$17, 237, 816
Oil-country casing, tubing, and pipe:			
Establishments.....	12	13	11
Tons.....	568, 733	882, 732	560, 379
Value.....	\$40, 386, 530	\$81, 369, 391	\$55, 373, 307
Other black pipe and galvanized pipe:			
Establishments.....	7	⁶ 5	7
Tons.....	12, 788	⁶ 31, 792	17, 034
Value.....	\$1, 603, 177	⁶ \$3, 628, 517	\$2, 108, 785
Mechanical tubing:			
Establishments.....	12	12	11
Tons.....	69, 687	229, 035	143, 327
Value.....	\$11, 835, 522	\$42, 208, 344	\$23, 846, 741
Horse and mule shoes, all industries: ⁵			
Establishments.....	8	9	12
Kegs (100 pounds).....	293, 538	417, 182	795, 368
Value.....	\$1, 428, 968	\$2, 663, 713	\$4, 811, 937
Horse and mule shoe calks, all industries: ⁶			
Establishments.....	8	10	11
Value.....	\$250, 704	\$538, 663	\$809, 784
Cold-rolled strip steel, flat bright, except cold-rolled from drawn wire, ⁷ all industries, total:			
Tons.....	465, 456	952, 812	
Value.....	\$41, 273, 963	\$83, 647, 021	
Made in Rolling Mill industry:			
Establishments.....	18	20	
Tons.....	324, 049	642, 302	
Value.....	\$26, 369, 717	\$50, 931, 596	
Made in other industries:			
Establishments.....	25	25	(⁸)
Tons.....	141, 407	310, 510	
Value.....	\$14, 904, 276	\$32, 715, 425	
Widths 6 inches and narrower:			
Tons.....	166, 071	348, 480	
Value.....	\$10, 155, 441	\$39, 536, 721	
Wider than 6 inches but under 12 inches:			
Tons.....	75, 858	220, 729	
Value.....	\$7, 250, 391	\$18, 335, 481	

See footnotes at end of table.

TABLE 5.—PRINCIPAL MANUFACTURES FROM ROLLING-MILL PRODUCTS, OTHER THAN TIN PLATE AND TERNEPLATE AND WIRE AND WIRE PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, AND NUMBER OF ESTABLISHMENTS REPORTING, FOR THE UNITED STATES: 1931,¹ 1929, AND 1927—Continued

[See note at head of table.]

KIND	1931 ¹	1929	1927
Cold-rolled strip steel, flat bright, etc.—Continued.			
Widths 12 inches and over (not including motor-vehicle fender steel):			
Tons.....	173,956	282,407	
Value.....	\$11,438,453	\$18,807,612	
Fender steel (for motor-vehicle fenders):			
Tons.....	49,571	101,196	
Value.....	\$3,429,708	\$6,067,207	
Cold-finished steel bars, all industries, total value.....	\$24,833,337	\$71,755,645	
Made in Rolling Mill industry:			
Establishments.....	9	12	
Tons.....	93,826	271,727	
Value.....	\$7,000,499	\$22,782,963	
Made in other industries:			
Establishments.....	27	36	
Value.....	\$17,742,838	\$48,972,682	
Rounds, 2 inches in diameter and smaller:			
Quantity reported:			(3)
Tons.....	140,195	371,854	
Value.....	\$10,007,855	\$31,170,912	
Quantity not reported, value.....		\$4,742,765	
Rounds, more than 2 inches in diameter:			
Quantity reported:			
Tons.....	81,859	119,579	
Value.....	\$5,873,189	\$8,000,582	
Quantity not reported, value.....		\$2,373,063	
Shapes (square, hexagonal, and flat):			
Quantity reported:			
Tons.....	72,608	237,298	
Value.....	\$5,572,013	\$18,515,402	
Quantity not reported, value.....		\$1,280,632	
Cold-finished steel bars (rounds) not distributed as to size:			
Quantity reported:			
Tons.....	34,827		
Value.....	\$2,682,593		
Quantity not reported, value.....	\$697,687	\$5,071,699	
Bearings and parts, ball and roller, all industries: ²			
Establishments.....	56	70	73
Value, total.....	\$50,528,087	\$120,033,812	\$99,848,765
Ball bearings.....		\$66,880,624	(3)
Roller bearings.....	\$26,867,981	\$53,153,188	(3)
Parts for sale as such.....	\$22,144,218	(3)	(3)
	\$1,515,888	(3)	(3)
Rolls for rolling mills, all industries:			
Establishments.....			
Steel: ³			
Tons.....	29	42	(3)
Value.....			
Iron:			
Tons.....	32,464	45,752	(3)
Value.....	\$5,413,104	\$6,852,598	(3)
	66,460	126,074	(3)
	\$7,935,177	\$14,533,031	(3)

¹ In addition to the products covered by this table, steel works and rolling mills reported, for 1931, the manufacture, for sale, of the following commodities: Fabricated structural steel, 33,700 tons (2,240 pounds), valued at \$1,950,715; switches, frogs, and crossings, 42,868 tons, \$7,240,858; gray-iron castings, 212,770 tons, \$6,774,393; malleable-iron castings, 8,493 tons, \$1,063,256; nonferrous-metal castings, 1,343,792 (data for tonnage incomplete); pressed, stamped and other shapes not advanced beyond pressing, 43,863 tons, \$3,114,184; machinery, \$12,969,495; miscellaneous products, including polished and planished sheets, steel springs, figures showing the total output of these products in all industries are given, so far as available, in the reports for the industries to which they normally belong. For production of tin plate and terneplate and of wire and wire products, including those made in departments operated in connection with steel works and rolling mills, see table on p. 861, Production of Tin Plate and Terneplate, and tables 4 and 5, pp. 866 and 868, on Wire and Wire Products.

² Made almost wholly in the Rolling Mill industry.

³ No comparable data.

⁴ For production of wire nails, brads, spikes, and tacks, see table 5, p. 868, on Wire Products.

⁵ The production in the Rolling Mill industry and in others is here shown in combination only, to avoid disclosing data reported by individual establishments or companies.

⁶ Revised.

⁷ For cold-rolled from drawn wire, see table 4, p. 866, of this report.

⁸ Includes value of parts for sale as such.

⁹ Not reported separately. See note 8.

TABLE 6.—PRODUCTION OF STEEL, FINISHED ROLLED PRODUCTS AND FORGINGS, AND STEEL CASTINGS, FOR THE UNITED STATES, 1925 TO 1931, AND FOR STATES, 1931

[This table presents statistics for all States for which figures can be published without disclosing, exactly or approximately, data for individual establishments. Certain of the "Other States," however, reported the production of larger quantities of steel than some of those shown separately]

[Ton, 2,240 pounds]

STATE	STEEL PRODUCTION, BY PROCESS				Finished rolled products and forgings ¹	Steel castings, all industries ²
	Total	Open hearth	Bessemer	Crucible and electric		
<i>United States</i>						
1931.....	25,895,040	22,518,208	3,018,938	358,494	18,396,161	480,427
1929.....	56,160,683	48,237,387	7,109,923	813,373	39,882,941	1,454,530
1927.....	44,756,716	38,005,244	6,179,602	571,870	32,154,094	(³)
1925.....	45,119,113	37,909,746	6,701,873	507,494	32,646,847	(³)
<i>States, 1931</i>						
Alabama.....	(⁴)	(⁴)	-----	-----	735,329	(⁴)
California.....	(⁴)	(⁴)	-----	9,813	(⁴)	13,536
Illinois.....	1,926,831	1,460,447	(⁴)	51,068	1,419,591	57,308
Indiana.....	2,983,079	2,751,654	(⁴)		2,208,003	30,036
Louisiana.....	(⁴)	-----	(⁴)	(⁴)	-----	1,434
Michigan.....	(⁴)	(⁴)	(⁴)	11,085	449,761	13,931
Missouri.....	(⁴)	(⁴)	-----	(⁴)	209,493	7,587
New Jersey.....	(⁴)	(⁴)	(⁴)	10,173	69,084	7,035
New York.....	1,140,420	1,106,522	-----	33,898	873,068	29,691
Ohio.....	6,460,588	4,954,871	1,391,415	114,302	3,813,684	71,120
Oregon.....	2,405	-----	-----	2,405	-----	2,430
Pennsylvania.....	8,282,106	7,409,443	787,053	85,610	6,025,158	188,142
West Virginia.....	(⁴)	(⁴)	(⁴)	(⁴)	815,791	(⁴)
Wisconsin.....	24,525	(⁴)	(⁴)	14,860	(⁴)	25,791
Other States.....	5,075,686	4,835,271	840,470	25,280	1,777,199	38,386

¹ Does not include tonnage of rolled billets and blanks for seamless tubes, nor tonnage, for sale, of rolled blooms and billets for forgings.

² The figures in this column include data for steel castings produced and consumed in the same plants in the Steel Works and Rolling Mill Products and the Foundry and Machine Shop Products industries. Establishments in other industries—for example, Motor Vehicles, Engines, Pumps, and Agricultural Implements—which produce steel castings for their own consumption are not required to report them to the Bureau of the Census.

³ No comparable data.

⁴ Not shown separately to avoid disclosing approximations of data for individual establishments or corporations; included in item for "Other States."

STATE	Total number of establishments	Rails	Re-rolled or renewed rails	Rail fastenings, tie plates, etc.	Structural shapes	Merchant bars, etc.	Concrete reinforcing bars	Bolt, nut, spike, and chain rods	Wire rods	Plates	Auto sheets	Plain sheets	Black sheets for tinning	Skelp	Hot-rolled strips for cold rolling	Other bars, bands, strips, and cotton ties	Axles	Car and locomotive wheels, rolled or forged	Nail and tack plate	Armor plate and ordnance	Muck and scrap bar	Steel	Steel ingots	Steel castings	
United States																									
1931	446	14	3	27	49	107	55	27	47	56	12	74	28	24	26	29	10				25	278	123	190	
1929	486	17	7	30	42	120	57	30	48	60	16	72	29	39	25	29	11			5	40	296	126	208	
States																									
Alabama	8	3		1	4	4	5	2	2	4		2				2	1					3	3	2	
California	19			1	4	5	4	3	1	1		2	1		1	2						17	6	15	
Colorado	3	1		1	1	1	1	1	1													3	1	3	
Connecticut	3														1							3	1	2	
Delaware	3									1												3	1	2	
Georgia	2			1	1	1	1		1							1						2	1	1	
Illinois	37	1			7	10	6	1	5	2		2			3	3		1			1	24	9	17	
Indiana	15	2		3	4	6	3	3	3	5		6	3	3		3	1				1	5	5	7	
Iowa	3																					3		3	
Kentucky	4				1				1			2			1						1	2	2	2	
Louisiana	1																					1		1	
Maine	1					1	1	1														1	1	1	
Maryland	4	1			1				1	2	1	2	1	1							1	1	1	1	
Massachusetts	9								1						1							8	1	11	
Michigan	16				2	1		1			2	1			1	1	1					13	2	8	
Minnesota	4				1	1	1		1																
Missouri	8			1	2	2	3	1	1	1		1										4	1	4	
New Jersey	12				4	1		1	2												1	5	2	4	
New York	24	1		2	3	9	4	2	6	1	1	3			1						1	7	3	5	
Ohio	74	1		3	5	12	5	2	8	13	8	25	7	11	2	2	1				2	15	8	11	
Oklahoma	2														6	8					4	22	24		
Oregon	3						1															1		1	
Pennsylvania	146	4	2	6	13	42	12	6	12	23		20	10	15	7	7	6	6	2	4	15	80	45	48	
Rhode Island	1								1						1							1	1		
Tennessee	2				1	1	1														1	1			
Texas	2						1															2	1	2	
Utah	1																					1		1	
Virginia	2			1		1		1												1	1	1		1	
Washington	5			1	1	2	2	1		1						1						5	2	3	
West Virginia	14	1	2	1			2	1		1		7	5	1	1							7	4	4	
Wisconsin	15				1	1						1										12		12	

TABLE 8.—STEEL—PRODUCTION, BY QUANTITY AND BY PROCESS: 1925 to 1931
[Ton, 2,240 pounds]

PROCESS	1931	1929	1927	1925
<i>Ingots and castings, total</i>	25,895,640	56,160,683	44,756,716	45,119,113
Open-hearth, total.....	22,518,208	48,237,387	38,005,244	37,909,746
Basic.....	22,131,176	47,141,354	37,126,725	37,055,831
Acid.....	387,032	1,096,033	878,519	853,915
Bessemer.....	3,018,938	7,109,923	6,179,602	6,701,873
Electric or electrically refined.....	357,140	806,759	550,507	458,051
Crucible.....	1,354	6,584	12,363	19,443
<i>Ingots, total</i>	25,436,339	54,793,683	43,773,763	44,111,200
Open-hearth, total.....	22,200,675	47,196,242	37,258,560	37,108,918
Basic.....	22,009,391	46,617,671	36,777,647	36,642,832
Acid.....	191,284	578,571	480,913	466,086
Bessemer.....	3,011,394	7,096,276	6,153,703	6,670,127
Electric or electrically refined.....	223,263	495,339	350,287	313,584
Crucible.....	1,007	5,827	11,213	18,571
<i>Direct steel castings, total</i>	459,301	1,367,000	982,953	1,007,913
Open-hearth, total.....	317,533	1,041,145	746,684	800,828
Basic.....	121,785	523,683	349,078	412,999
Acid.....	195,748	517,462	397,606	387,829
Bessemer.....	7,544	13,648	25,899	31,746
Electric or electrically refined.....	133,877	311,450	209,220	174,467
Crucible.....	347	767	1,150	872

TABLE 9.—STEEL—PRODUCTION, FOR CONSUMPTION AND FOR SALE, BY PROCESS,
FOR THE UNITED STATES: 1931

[Ton, 2,240 pounds]

	Total tons	FOR CONSUMPTION BY PRODUCING COMPANY			For sale
		Total	In works where produced	In other works of same company	
Total:					
1931.....	¹ 25,895,640	25,492,523	25,281,747	210,776	403,117
1929.....	56,160,683	54,806,226	54,287,905	518,261	1,354,457
1927.....	44,756,716	43,804,792	43,431,590	373,202	951,924
1925.....	45,119,113	44,122,705	43,646,262	476,443	996,408
BY PROCESS, 1931					
Open-hearth, total.....	22,518,208	22,242,443	22,084,988	157,455	275,765
Basic.....	22,131,176	21,974,340	21,830,388	143,952	156,836
Acid.....	387,032	268,103	254,600	13,503	118,929
Bessemer.....	3,018,938	3,012,821	2,965,429	47,392	6,117
Electric or electrically refined.....	357,140	² 237,259	² 231,330	² 5,929	² 121,235
Crucible.....	1,354				

¹ Includes 985,191 tons of duplex steel and 1,336,323 tons of alloy steel (table 10). For production of steel castings in other industries, see footnote 1, table 4.² Combined to avoid disclosing approximations of data for individual establishments.

TABLE 10.—ALLOY STEEL—PRODUCTION, BY PROCESS, FOR THE UNITED STATES: 1927 TO 1931

PROCESS	1931	1929	1927
Number of establishments.....	102	133	123
Aggregate production.....	<i>Ton (2,240 lbs.)</i> 1,336,323	<i>Ton (2,240 lbs.)</i> 3,243,347	<i>Ton (2,240 lbs.)</i> 2,238,692
Open-hearth, total.....	1,125,457	2,763,440	1,928,069
Basic.....	1,064,615	2,647,194	1,828,066
Acid.....	60,842	116,255	99,403
Bessemer.....	13,100	27,906	45,298
Crucible and electric.....	197,766	451,992	265,325
Ingot.....	1,267,875	3,085,305	2,123,340
Castings.....	68,448	158,042	115,352

TABLE 11.—STEEL FURNACES (ACTIVE ESTABLISHMENTS)—CAPACITY AND OUTPUT, FOR THE UNITED STATES, 1925 TO 1931, AND FOR STATES, 1931

STATE	Number of establishments operating steel furnaces	Daily capacity (24 hours) tons of 2,240 pounds	Production during year, tons of 2,240 pounds
<i>United States</i>			
1931.....			
1929.....	283	234,933	25,895,640
1927.....	296	224,705	58,160,683
1925.....	292	211,978	44,756,716
	260	212,034	45,119,113
<i>States, 1931</i>			
Illinois.....			
Indiana.....	24	24,904	1,926,831
New York.....	9	26,097	2,983,079
Ohio.....	16	11,007	1,140,420
Pennsylvania.....	41	49,663	6,460,583
Wisconsin.....	81	81,890	8,282,106
Alabama.....	12	791	24,525
California.....	3	9,440	
Massachusetts.....	18	2,260	
Michigan.....	8	762	
Missouri.....	13	4,021	
New Jersey.....	5	1,521	
Washington.....	8	1,252	
West Virginia.....	5	533	
Other States.....	7	5,347	
	33	14,785	5,078,091

1 Revised.

2 Combined to avoid disclosing approximations of data for individual establishments.

TABLE 12.—STEEL FURNACES AND METAL MIXERS (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY PROCESS, FOR THE UNITED STATES, 1925 TO 1931, AND FOR STATES, 1931

[Ton, 2,240 pounds]

STATE	OPEN HEARTH				CONVERTERS			ELECTRIC		CRUCIBLE			METAL MIXERS				
	Basic		Acid		Num-ber of estab-lish-ments	Num-ber of capacity-con-verters	Daily capacity (24 hours) Tons	Num-ber of estab-lish-ments	Num-ber of fur-naces	Daily capacity (24 hours) Tons	Num-ber of estab-lish-ments	Num-ber of fur-naces	Daily capacity (24 hours) Tons	Num-ber of mixers	Capacity Tons		
	Num-ber of estab-lish-ments	Num-ber of fur-naces	Daily capacity (24 hours) Tons	Num-ber of estab-lish-ments												Num-ber of fur-naces	Daily capacity (24 hours) Tons
<i>United States</i>																	
1931	107	985	57	138	37	79	47,461	148	271	6,407	17	36	174	97		54,025	
1929	110	988	62	152	34	76	45,507	158	265	6,572	21	46	288	95		51,523	
1927	112	982	68	168	45	95	46,417	137	219	5,357	21	55	296	88		48,038	
1925	110	987	63	154	47	102	55,289	111	178	4,461	23	70	300	90		44,611	
<i>States, 1931</i>																	
Alabama	3	24			1	3	2,900	15	27	391				3		1,850	
California	4	17	1	1	1	2	80	2	3	30				4		1,200	
Colorado	1	16						1	2	10	1	3	3				
Connecticut	1	3						1	1	1							
Delaware	1	6			1	2	10			18							
Georgia	1	3						1	1	8							
Illinois	11	96	1	2	3	8	7,260	12	25	721	1	1	8	12		5,750	
Indiana	4	91	4	10	2	5	3,750	4	4	129			3	9		4,800	
Iowa					1	1	10	2	3	103				1		600	
Kentucky	2	16															
Louisiana					1	2	16										
Maryland	1	17			1	3	1,500							4		3,200	
Massachusetts	1	3	3	8	1	2	10	3	4	54	3	5	7				
Michigan	2	15	2	4	2	3	30	11	17	316	1	6	10	1		200	
Minnesota	1	10	1	2				3	5	48				1		600	
Missouri	2	14						3	4	61							
New Jersey	2	5	4	11	1	1	60	3	8	183	3	4	9				
New York	2	44	5	8	4	4	2,500	10	25	626	1	4	29	4		1,650	
New York	5	7	8	4	9	15	12,303	16	32	1,378				24		12,475	
Ohio	24	197	4	8	9			1	1								
Oklahoma	1																

1 Revised.

TABLE 12.—STEEL FURNACES AND METAL MIXERS (ACTIVE ESTABLISHMENTS)—NUMBER AND CAPACITY, BY PROCESS, FOR THE UNITED STATES, 1925 TO 1931, AND FOR STATES, 1931—Continued

[Ton, 2,240 pounds]

STATE	OPEN HEARTH				CONVERTERS		ELECTRIC		CRUCIBLE		METAL MIXERS	
	Basic		Acid		Num- ber of estab- lish- ments	Num- ber of con- verters	Daily capacity (24 hours) Tons	Num- ber of estab- lish- ments	Num- ber of fur- naces	Daily capacity (24 hours) Tons	Num- ber of mixers	Capacity Tons
	Num- ber of estab- lish- ments	Num- ber of fur- naces	Daily capacity (24 hours) Tons	Num- ber of estab- lish- ments	Num- ber of fur- naces	Daily capacity (24 hours) Tons						
<i>States, 1931—Continued</i>												
Oregon.....	36	384	53,985	28	75	4,936	Tons	3	6	81		
Pennsylvania.....	1	3	180	11	26	10,172		30	71	1,089	13	108
Rhode Island.....				1	1	24		2	3	57		
Tennessee.....												
Texas.....												
Utah.....								1	1	9		
Virginia.....								1	2	24		
Washington.....	1	4	450					4	0	83		
West Virginia.....	2	16	4,313	1	2	900		3	5	59		
Wisconsin.....				2	5	480		10	15	311	1	1,300

STOVES AND RANGES, HEATING APPARATUS, AND STEAM FITTINGS

[A preliminary report for these industries was issued under date of Dec. 27, 1932]

Description of the industries.—This report covers two industries—namely, (1) Steam and Hot-Water Heating Apparatus and Steam Fittings and (2) Stoves and Ranges (Other Than Electric) and Warm-Air Furnaces. The products of the first industry are steam and hot-water heating boilers, radiators, safety valves, vacuum gauges, heat regulators, coils, unions, flanges, and similar fittings, and other classes of steam specialties. The products of the second are stoves, ranges, heaters, and burners of all kinds (except those made for industrial use), designed to consume coal, wood, gas, oil, alcohol, acetylene, and gasoline; flatirons heated with alcohol or other fuel burned internally; gas and oil appliances for heating water for kitchen or household use, and other gas-burning heating and cooking appliances; warm-air furnaces, auxiliary and ventilating heaters, and stove and furnace parts. The manufacture of electric stoves, ranges, and heating appliances is included in the Electrical Machinery, Apparatus, and Supplies industry.

TABLE 1.—SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE UNITED STATES, 1904 TO 1931, AND FOR EACH INDUSTRY, BY STATES, 1931

[Data for establishments with products under \$5,000 in value included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the respective industries than some of the States shown separately]

	Number of estab- lishments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and pur- chased electric energy	Value of products ¹	Value added by manu- facture ¹
THE GROUP AS A WHOLE						
<i>United States</i>						
1931.....	827	61,576	\$64,832,704	\$91,537,293	\$271,607,011	\$180,069,718
1929.....	849	86,237	124,121,383	173,455,317	500,057,283	326,601,946
1927.....	796	88,073	129,178,554	109,931,238	483,444,219	313,612,981
1925.....	789	89,774	130,278,659	173,229,684	493,232,937	320,003,253
1923.....	824	93,953	133,138,023	185,865,213	490,216,026	304,350,813
1921.....	786	63,259	78,904,276	112,430,530	271,652,356	159,221,826
1919.....	849	80,119	99,642,488	151,291,679	361,795,480	210,503,801
1914.....	846	63,713	42,603,367	60,876,072	153,312,472	92,436,400
1909.....	804	60,508	36,834,978	51,872,469	132,936,828	81,064,359
1904.....	670	45,094	26,351,501	32,695,960	87,043,662	54,347,702
Percent of increase or de- crease (—):						
1929-31.....	-2.6	-28.6	-47.8	-47.2	-45.7	-44.7
1927-29.....	6.7	-2.1	-3.9	2.1	3.4	4.2
1925-27.....	.9	-1.9	— .8	-1.9	-2.0	-2.0
1923-25.....	-4.2	-4.4	-2.1	-6.8	.6	5.1
1921-23.....	4.8	48.5	63.7	65.3	80.5	91.1
1919-21.....	-7.4	-21.0	-20.8	-25.7	-24.9	-24.4
1921-31.....	5.2	-2.7	-17.8	-18.6	(²)	13.5
1919-29.....	—	7.6	24.6	14.6	38.2	55.2
1909-19.....	-1.7	32.4	170.5	191.7	172.2	169.7

Footnotes at end of table.

TABLE 1.—SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE UNITED STATES, 1904 TO 1931, AND FOR EACH INDUSTRY, BY STATES, 1931—Continued

[See note at head of table]

	Number of estab- lishments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and pur- chased electric energy	Value of products ¹	Value added by manu- facture ¹
STEAM AND HOT-WATER HEATING APPARATUS AND STEAM FITTINGS						
<i>United States</i>						
1931.....	238	28,996	\$29,557,784	\$29,704,072	\$102,500,918	\$72,796,840
1929.....	240	39,621	58,974,874	72,708,268	228,310,254	155,601,980
1927.....	232	42,893	64,851,149	76,835,267	225,158,390	148,323,123
1925.....	225	43,260	63,979,276	77,359,905	228,929,985	151,573,080
1923.....	236	44,141	64,806,855	83,297,279	221,954,313	138,057,034
1921.....	274	30,808	39,596,053	50,213,402	127,366,887	77,153,485
1919.....	261	36,686	45,742,525	72,016,393	160,285,458	88,269,095
1914.....	295	26,388	16,737,879	20,921,102	63,922,434	37,001,332
1909.....	288	23,378	13,890,699	22,534,208	54,083,505	31,549,297
1904.....	176	11,690	6,581,578	10,425,332	24,910,857	14,485,525
1899.....	227	9,252	4,982,857	10,219,506	22,084,860	11,865,364
Percent of increase or de- crease (—):						
1929-31.....	- 8	-26.8	-49.9	-59.1	-55.1	-53.2
1927-29.....	3.4	-7.6	-9.1	-5.4	1.4	4.0
1925-27.....	3.1	- 8	1.4	- 7	-1.6	-2.1
1923-25.....	-4.7	-2.0	-1.3	-7.1	3.1	0.3
1921-23.....	-13.9	43.3	63.7	65.9	74.3	70.7
1919-21.....	5.0	-16.0	-13.4	-30.3	-20.5	-12.0
1921-31.....	-13.1	-5.9	-25.4	-40.8	-19.5	-5.6
1919-29.....	-8.0	8.0	28.0	1.0	42.4	70.3
1909-19.....	-9.4	56.9	229.3	219.6	196.4	170.8
1899-1909.....	26.9	152.7	178.8	120.5	144.9	165.9
<i>States, 1931</i>						
California.....	8	163	\$170,057	\$212,816	\$665,877	\$453,061
Connecticut.....	9	2,213	2,359,581	1,770,745	6,820,928	5,050,183
Florida.....	3	12	13,144	12,745	43,132	30,387
Illinois.....	32	8,058	8,053,818	6,158,462	25,544,285	19,385,823
Indiana.....	10	854	764,186	965,655	3,661,147	2,605,492
Massachusetts.....	24	1,738	1,919,794	1,604,677	5,820,297	4,215,020
Michigan.....	16	1,235	1,190,744	1,468,912	4,935,397	3,466,485
Missouri.....	6	82	115,387	211,910	433,367	221,467
New Jersey.....	11	1,580	2,009,156	2,468,732	7,802,388	5,333,050
New York.....	37	3,420	3,545,716	3,865,102	11,852,014	7,980,012
Ohio.....	21	2,900	2,887,431	3,476,948	10,176,130	6,609,182
Pennsylvania.....	35	4,279	4,075,298	4,184,432	14,236,280	10,051,848
Rhode Island.....	4	124	125,847	245,657	695,924	450,267
Wisconsin.....	5	711	762,957	1,323,959	3,184,960	1,861,001
Other States ¹	17	1,627	1,564,668	1,733,320	6,628,792	4,895,472

Footnotes at end of table.

TABLE 1.—SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE UNITED STATES, 1904 TO 1931, AND FOR EACH INDUSTRY, BY STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES						
<i>United States</i>						
1931.....	589	32,580	\$35,274,920	\$61,833,221	\$169,106,093	\$107,272,872
1929.....	609	46,616	65,146,509	100,747,049	271,747,009	170,999,960
1927.....	564	45,180	64,327,405	93,095,971	258,285,829	165,189,858
1925.....	664	46,514	66,299,363	95,872,779	264,302,952	168,430,173
1923.....	588	49,812	68,331,168	102,567,934	268,261,713	165,693,779
1921.....	512	32,451	39,308,223	62,217,128	144,285,469	82,068,341
1919.....	588	43,433	53,899,963	79,275,286	201,509,992	122,234,706
1914.....	551	37,325	25,865,488	33,954,970	89,390,038	55,435,068
1909.....	576	37,130	22,944,279	29,338,261	78,853,323	49,515,062
1904.....	494	33,404	19,769,923	22,270,628	62,182,805	39,802,177
Percent of increase or decrease (—):						
1929-31.....	-3.3	-30.1	-45.9	-38.6	-37.8	-37.3
1927-29.....	8.0	3.2	1.3	8.2	5.2	3.5
1925-27.....	—	-2.9	-3.0	-2.9	-2.3	-1.9
1923-25.....	-4.1	-6.6	-3.0	-6.5	-1.5	1.7
1921-23.....	14.8	53.5	73.8	64.9	85.9	101.9
1919-21.....	-12.9	-25.3	-27.1	-21.5	-28.4	-32.9
1921-31.....	15.0	0.4	-10.3	-0.6	17.2	30.7
1919-29.....	4.1	7.3	20.9	27.1	34.9	39.9
1909-19.....	2.1	17.0	134.9	170.2	155.6	146.9
<i>States, 1931</i>						
Alabama.....	8	806	\$574,300	\$741,756	\$2,232,135	\$1,490,379
California.....	56	1,374	1,796,803	3,524,626	8,882,452	5,357,826
Connecticut.....	6	214	372,697	1,170,231	2,894,214	1,714,983
Georgia.....	6	455	329,676	267,466	1,183,444	915,978
Illinois.....	79	4,806	5,252,438	9,838,853	25,311,075	15,472,222
Indiana.....	22	830	909,431	1,659,007	3,831,679	2,172,672
Iowa.....	14	345	424,855	707,929	3,289,641	2,581,712
Kentucky.....	4	197	189,790	322,032	969,422	647,390
Maine.....	4	123	147,376	150,633	430,830	280,197
Maryland.....	6	413	445,149	830,255	1,913,396	1,083,141
Massachusetts.....	26	1,895	2,294,565	3,056,669	9,206,428	6,149,759
Michigan.....	32	3,089	3,729,978	7,172,971	22,730,641	15,557,670
Minnesota.....	14	462	555,508	1,259,557	2,749,389	1,489,832
Missouri.....	23	1,359	1,446,790	3,287,887	9,390,128	6,122,141
New Jersey.....	18	643	820,709	1,541,725	4,262,814	2,721,089
New York.....	42	2,293	1,518,342	2,154,179	5,882,670	3,728,491
Ohio.....	84	6,711	6,666,380	11,725,962	29,129,549	17,403,587
Oregon.....	11	164	204,127	212,743	675,282	462,539
Pennsylvania.....	59	3,287	3,985,876	6,643,738	18,378,903	11,735,170
Rhode Island.....	4	38	54,650	129,243	406,533	277,390
Tennessee.....	16	2,003	1,467,420	2,316,967	6,193,112	3,726,145
Texas.....	4	7	5,168	36,835	83,634	47,299
Washington.....	16	232	249,353	395,428	1,061,028	635,600
West Virginia.....	4	118	111,006	110,202	281,867	171,786
Wisconsin.....	15	1,389	1,416,347	2,247,453	6,627,808	4,380,355
Other States ³	16	305	303,285	340,279	1,067,799	747,520

¹ The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for other years represent production. See sec. 19, p. 9.² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.³ Less than one-tenth of 1 percent.⁴ Alabama, 2 establishments; Iowa, 2; Maryland, 2; Minnesota, 6; New Hampshire, 1; Oregon, 1; Tennessee, 1; Virginia, 1; Washington, 1.⁵ Arkansas, 1 establishment; Colorado, 4; Kansas, 3; Louisiana, 1; Nebraska, 1; North Carolina, 1; Oklahoma, 2; Virginia, 3.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR EACH INDUSTRY, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
STEAM AND HOT-WATER HEATING APPARATUS AND STEAM FITTINGS													
United States													
1931	28,996	32,481	32,052	31,117	29,707	29,380	28,720	28,035	27,860	27,630	27,811	27,114	26,039
1929	39,621	39,728	40,865	40,403	39,177	38,429	38,400	38,496	38,857	40,351	41,442	40,913	38,400
1925	43,200	42,609	43,301	42,966	41,567	41,616	41,746	42,084	42,736	43,874	45,393	45,880	45,312
1919	36,680	35,881	35,522	35,224	34,119	33,446	32,022	31,315	34,041	39,505	41,728	43,162	44,287
1914	26,388	26,338	27,061	27,398	26,767	26,483	26,071	26,041	27,178	26,450	25,913	25,632	25,334
States, 1931													
California	163	178	176	165	162	162	141	157	157	172	169	167	158
Connecticut	2,213	2,550	2,504	2,362	2,278	2,206	2,112	2,159	2,108	2,048	2,104	2,057	2,068
Florida	12	12	11	12	13	14	11	12	11	10	12	11	13
Illinois	8,058	8,885	9,745	9,355	8,278	8,231	8,146	7,865	7,584	7,121	6,905	6,750	6,829
Indiana	854	792	806	864	913	887	890	879	938	942	862	792	676
Massachusetts	1,738	1,895	1,794	1,814	1,805	1,785	1,750	1,610	1,685	1,667	1,696	1,699	1,646
Michigan	1,235	1,322	1,316	1,296	1,209	1,155	1,125	1,162	1,108	1,252	1,332	1,278	1,265
Missouri	82	104	94	99	75	65	76	73	71	91	73	82	84
New Jersey	1,586	1,836	1,958	1,606	1,648	1,725	1,536	1,837	1,415	1,520	1,551	1,508	1,390
New York	3,426	3,538	3,527	3,450	3,440	3,397	3,410	3,347	3,372	3,365	3,487	3,475	3,233
Ohio	2,500	3,128	3,089	2,989	2,970	2,943	2,937	2,869	2,887	2,845	2,840	2,787	2,502
Pennsylvania	4,279	4,610	4,502	4,480	4,493	4,359	4,158	4,085	4,060	4,045	4,241	4,175	4,060
Rhode Island	124	129	132	131	121	127	129	123	126	126	126	110	110
Wisconsin	711	688	696	699	694	700	699	715	710	735	740	736	710
STOVES AND RANGES (OTHER THAN ELECTRIC) AND WARM-AIR FURNACES													
United States													
1931	32,580	29,664	32,902	34,263	33,987	33,681	32,919	31,404	33,149	34,988	34,730	31,657	27,686
1929	46,616	42,637	44,668	45,503	46,114	46,612	46,579	46,336	47,823	49,728	51,301	47,687	44,406
1925	46,514	42,903	46,443	47,328	46,398	45,680	45,652	47,710	46,222	47,818	50,444	50,611	47,952
1919	43,433	37,115	39,577	39,993	40,111	41,679	42,687	42,764	44,983	45,956	47,902	49,266	49,175
1914	37,325	34,734	38,955	40,023	40,108	39,327	39,233	34,579	35,903	36,903	37,853	36,026	34,186
States, 1931													
Alabama	506	694	806	827	823	824	837	836	852	851	844	796	687
California	1,374	1,282	1,313	1,279	1,310	1,323	1,291	1,344	1,403	1,475	1,558	1,478	1,420
Connecticut	214	162	171	169	167	173	181	185	209	307	344	261	241
Georgia	455	443	450	457	450	453	453	453	457	488	465	488	442
Illinois	4,806	3,620	4,610	4,909	5,332	5,404	5,256	4,926	5,037	5,412	5,297	4,371	3,492
Indiana	830	698	937	888	830	718	786	317	907	981	920	814	653
Iowa	367	383	391	389	381	331	317	300	410	434	428	369	272
Kentucky	197	147	167	169	178	174	172	186	217	257	287	252	153
Maine	123	127	127	127	127	125	127	123	120	119	122	120	117
Maryland	413	392	342	406	431	460	447	449	431	481	420	427	374
Massachusetts	1,895	1,524	1,606	1,972	1,985	1,886	1,915	1,688	1,816	2,099	2,168	2,114	1,967
Michigan	3,089	3,026	3,479	3,779	3,210	3,125	3,135	2,740	3,150	3,158	2,951	2,740	2,576
Minnesota	462	446	471	489	481	484	495	478	451	443	457	434	407
Missouri	1,359	1,258	1,500	1,409	1,372	1,329	1,259	1,214	1,289	1,600	1,645	1,608	1,152
New Jersey	642	623	625	603	657	670	658	659	652	675	637	614	614
New York	1,293	1,197	1,279	1,403	1,367	1,458	1,369	1,283	1,270	1,297	1,301	1,222	1,071
Ohio	6,711	6,934	7,015	6,952	7,020	6,787	6,633	6,312	6,812	6,981	7,041	6,308	5,648
Oregon	164	82	134	165	165	167	169	128	182	205	201	173	180
Pennsylvania	3,287	3,112	3,179	3,336	3,264	3,347	3,357	3,352	3,875	3,302	3,351	3,299	3,105
Rhode Island	88	34	35	35	35	35	35	35	35	45	45	45	45
Tennessee	2,003	1,757	2,090	2,169	2,207	2,235	1,994	1,808	2,171	2,234	2,129	1,940	1,240
Texas	7	3	4	8	8	9	9	10	10	9	4	5	4
Washington	232	205	200	224	233	231	236	248	255	277	239	228	207
West Virginia	118	114	110	115	120	118	116	112	118	118	128	132	116
Wisconsin	1,389	1,195	1,533	1,623	1,616	1,551	1,388	1,375	1,228	1,353	1,356	1,287	1,162

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE: 1931 AND 1929

KIND	1931		1929	
	Number	Value	Number	Value
1. "Steam and Hot-Water Heating Apparatus and Steam Fittings" and "Stoves and Ranges (Other Than Electric) and Warm-Air Furnaces" industries, total.....		\$271,607,011		\$500,057,263
2. Stoves, ranges, heating apparatus (other than electric), and parts (including fittings, valves, and specialties).....		255,537,217		467,087,332
3. Other products (not normally belonging to the industries) and receipts for repair work.....		16,069,704		32,969,931
4 Stoves, ranges, heating apparatus (other than electric), and steam fittings made as secondary products in other industries.....		15,534,468		23,894,667
Stoves, ranges, heating apparatus (other than electric), and parts (including fittings, valves, and specialties), all industries, aggregate value (sum of 2 and 4).....		271,071,685		490,981,999
Steam and hot-water heating apparatus, total.....		36,030,485		81,440,505
Steam and hot-water heating boilers and parts, total.....		19,057,427		40,324,406
Cast-iron steam and hot-water heating boilers:				
Number reported.....	99,424	9,358,999	(1)	33,152,631
Number not reported.....		5,057,282		
Steel steam and hot-water heating boilers.....	16,864	3,401,081	(1)	5,332,172
Parts for heating boilers.....		1,240,065		1,839,603
Radiators, total.....		16,973,058		41,116,099
Cast-iron, except gas-fired.....		15,326,304		37,919,080
Copper, except gas-fired.....		1,339,379		2,757,207
Gas-fired.....		307,375		439,812
Warm-air furnaces, parts, and registers, total.....		24,641,687		43,311,273
Warm-air furnaces.....	207,375	18,274,414	378,546	32,579,551
Parts and registers.....		6,367,173		10,731,722
Unit heaters, total.....		5,166,870		9,238,556
Number reported.....	20,255	3,531,339	48,491	7,761,761
Number not reported.....		1,635,531		1,476,765
Stoves, ranges, water heaters, and parts, total.....		106,811,177		181,437,004
Coal and wood, total.....		31,484,160		66,593,923
Coal and wood cooking stoves and ranges, total.....	415,334	17,896,490	739,523	32,098,463
Porcelain-enameled.....	211,701	12,924,046	353,741	21,375,485
Other than porcelain-enameled.....	203,633	4,972,444	324,296	8,762,852
Not separately reported as to finish.....			61,486	1,980,126
Coal and wood heating stoves, total.....		10,448,329	886,721	23,621,431
Porcelain-enameled.....	270,074	7,290,498	425,506	18,014,935
Other than porcelain-enameled.....	230,984	2,717,369	415,455	4,878,038
Not separately reported as to finish.....			45,760	728,458
Sheet metal (air-tight, etc.):				
Number reported.....	167,516	341,820	(2)	(1)
Number not reported.....		98,642		
Water heaters (domestic supply).....	160,455	1,123,495	(1)	1,443,897
Coal and wood stoves, ranges, and water heaters, not separately reported.....				5,784,105
Parts for coal and wood stoves, ranges, and water heaters.....		2,015,846		3,646,027
Gas, total.....		56,273,708		93,772,195
Gas cooking stoves and ranges, total.....	1,002,194	36,962,234	1,602,427	57,354,006
Porcelain-enameled:				
With insulated ovens.....	366,968	17,497,307	155,934	7,069,985
With uninsulated ovens.....	434,217	13,835,279	957,199	35,940,896
Not separately reported as to insulation.....			191,339	6,809,371

Footnotes at end of table.

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE: 1931 AND 1929—Con.

KIND	1931		1929	
	Number	Value	Number	Value
Stoves, ranges, heating apparatus etc.—Continued.				
Stoves, ranges, water heaters and parts—Contd.				
Gas—Continued.				
Gas cooking stoves and ranges—Continued.				
Other than porcelain-enameled:				
With insulated ovens.....	62,624	\$1,751,301	12,541	\$280,650
With uninsulated ovens.....	138,385	3,878,257	250,702	6,803,973
Not separately reported as to insulation.....				
Gas hot plates.....	167,442	545,286	28,652	449,131
Gas room heaters, total.....	446,096	4,613,255	(¹)	(¹)
				11,569,718
Porcelain-enameled.....	63,897	1,217,528		
Other than porcelain-enameled.....	383,099	3,205,727	(¹)	(¹)
Gas water heaters (domestic supply).....	637,783	11,935,229	894,785	18,203,497
Gas stoves, ranges, and heaters, not reported separately as to kind.....			(¹)	3,027,477
Parts for gas stoves, ranges, and heaters.....		2,317,704		3,017,497
Kerosene, total.....		10,917,901		14,090,040
Kerosene cooking stoves and ranges, total.....	486,842	7,310,432	758,530	11,352,202
Porcelain-enameled.....	158,952	2,842,821	262,152	5,793,808
Other than porcelain-enameled.....	327,890	4,467,611	496,378	5,558,396
Kerosene room heaters, total.....	108,407	560,212	190,060	1,112,400
Porcelain-enameled.....	15,528	147,009	45,071	359,048
Other than porcelain-enameled.....	92,879	413,203	150,989	753,352
Kerosene water heaters (domestic supply).....	12,086	220,089	26,682	447,903
Parts for kerosene cooking stoves, ranges, and heaters.....		2,821,228		1,177,535
Gasoline, total.....		3,093,533		3,850,533
Gasoline cooking stoves (except camp stoves) and ranges, total.....		1,643,635		2,181,760
Porcelain-enameled:				
Number reported.....	33,688	1,063,503	(¹)	1,913,094
Number not reported.....		345,007		268,866
Other than porcelain-enameled.....	12,500	235,125	10,462	42,338
Gasoline water heaters (domestic supply).....	1,535	20,082	2,137	
Gasoline camp stoves:				
Number reported.....	86,675	281,302	130,501	538,618
Number not reported.....		101,282		
Parts for gasoline cooking stoves, ranges, and heaters.....		1,046,632		1,037,817
Combination (coal, wood, and gas) cooking stoves and ranges, total.....	20,613	2,394,537		
Porcelain-enameled:				
With insulated ovens.....	6,478	530,546		
With uninsulated ovens.....	20,863	1,659,927		
Other than porcelain-enameled:				
With insulated ovens.....	302	43,998		
With uninsulated ovens.....	1,970	100,066		
Other stoves, ranges, and water heaters, total.....		1,593,877		3,130,813
Laundry, orchard, etc.....		915,099		
Other water heaters (solar, indirect, etc.).....		678,278		
Stoves, ranges, water heaters, etc., kind not specified.....		1,053,901		
Other heating and cooking apparatus and supplies:				
Fuel-oil burners (residence type), total.....		19,123,237		21,354,818
For furnaces:				
Mechanical or forced draft.....	86,011	14,945,314	101,950	19,693,66
Atmospheric (natural) draft.....	2,747	225,514		
For stoves and ranges:				
Mechanical or forced draft.....	11,402	276,675		
Atmospheric (natural) draft:				
Number reported.....	97,357	2,482,835	(¹)	1,661,162
Number not reported.....		314,759		
Fuel-oil burners, kind not specified.....		978,140		

Footnotes at end of table.

STOVES AND RANGES, HEATING APPARATUS, STEAM FITTINGS 851

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE: 1931 AND 1929—Con.

KIND	1931		1929	
	Number	Value	Number	Value
Stoves, ranges, heating apparatus—Continued.				
Other heating and cooking apparatus and supplies—Continued.				
Gas burners (residence type), total.....		\$1,458,297		
For furnaces.....	10,708	828,097		
For stoves and ranges:			(¹)	(²)
Number reported.....	36,009	509,997		
Number not reported.....		120,203		
Parts for fuel-oil and gas burners.....		977,990		
Stokers, mechanical (domestic).....	4,997	1,015,699	7,031	\$1,115,637
Incinerators, total.....	(¹)	490,188	(¹)	908,391
Gas-operated, household type.....	(¹)	140,970	(¹)	128,764
All other incinerators.....	(¹)	355,218	(¹)	779,627
Portable ovens (detachable ovens for use on oil, gasoline, and other stoves).....	381,400	976,540	734,850	2,882,153
Steam tables, except electric.....	(¹)	304,997	(¹)	1,321,867
Coffee urns and tanks, except electric.....	(¹)	313,359		
Waffle irons, except electric.....	(¹)	23,381		
Iron cooking utensils (hollow and flat ware).....	(¹)	522,331		7,241,420
Other cafeteria, hotel, and kitchen apparatus.....		3,131,232		
Heating and cooking equipment, kind not reported.....		1,435,673		
Fittings, valves, and specialties, total.....		61,435,066		140,730,375
Specialties, total.....		25,221,068		
Thermostats and other temperature-control devices, total.....		11,445,891		
Number reported.....	1,169,800	7,913,344		50,550,322
Number not reported.....		3,532,547		
Gages.....		1,516,993		
Reducing valves.....		1,261,029		
Regulators.....		2,574,227		
Traps.....		2,799,208		
Other specialties.....		5,623,750		
Fittings, faucets and spigots, and valves, total.....		*36,213,938		*90,180,053
Fittings, total.....		13,902,836		
Brass and bronze.....		1,044,668		
Cast-iron:				
Bell and spigot.....		525,737		
Other.....		4,290,322	(¹)	(¹)
Malleable iron.....		6,597,787		
Steel (cast or forged).....		1,462,613		
Other metals.....		11,704		
Faucets and spigots.....		1,635,257		
Valves:				
Brass and bronze.....		10,126,901		
Other.....		10,648,944		
Air-conditioning equipment.....		1,439,272	(¹)	(³)
Incubators and brooders.....		5,768,404	(¹)	(³)

¹ Data incomplete.

² Sheet-metal (airtight, etc.) coal and wood heating stoves were not reported separately for 1929. Data included under Coal and wood heating stoves—Other than porcelain-enamelled.

³ Not called for on schedule.

⁴ Not reported separately.

⁵ Value of fittings, faucets and spigots, and valves made by establishments engaged primarily in the manufacture of steam and hot-water heating apparatus and stoves and ranges. For total value of fittings, etc., made in all industries, see table 6, p. 993, Foundry and Machine-shop Products Not Elsewhere Classified.

⁶ Not comparable with item for 1931; includes \$7,553,536, value of fittings, etc., made in other industries. See note 5.

TABLE 4.—PRINCIPAL PRODUCTS, BY KIND, NUMBER OF ESTABLISHMENTS REPORTING, AND VALUE, BY STATES: 1931

[Statistics are given for each State which reported products of the specified kind to the value of at least \$500,000, except in cases where it was necessary to withhold the figures to avoid disclosing, exactly or approximately, data reported by individual establishments. The total for each kind of products represents the production in *all States*, and therefore exceeds the sum of the State items given]

KIND AND STATE	Number of establishments	Value of products
Steam and hot-water heating apparatus:		
Cast-iron steam and hot-water heating boilers, total.....	41	\$14,416,281
Michigan.....	5	2,043,412
New Jersey.....	3	1,237,225
New York.....	9	4,814,965
Pennsylvania.....	10	2,913,266
Steel steam and hot-water heating boilers, total.....	19	3,401,081
Illinois.....	6	1,607,514
Pennsylvania.....	6	1,314,756
Radiators, cast-iron, total.....	31	15,326,304
New Jersey.....	3	4,004,650
New York.....	7	3,357,622
Ohio.....	3	1,431,836
Pennsylvania.....	9	3,995,502
Warm-air furnaces, total.....	194	18,274,414
California.....	17	1,210,103
Illinois.....	23	1,137,638
Iowa.....	7	1,914,861
Michigan.....	16	4,790,703
New York.....	12	1,561,306
Ohio.....	34	3,181,671
Pennsylvania.....	19	1,940,125
Unit heaters, total.....	37	5,166,870
Wisconsin.....	6	849,004
Stoves, ranges, and water heaters:		
Coal and wood cooking stoves and ranges, total.....		17,896,400
Porcelain-enameled, total.....	125	12,924,046
Illinois.....	21	1,487,497
Indiana.....	9	590,254
Massachusetts.....	6	1,911,844
Michigan.....	4	909,146
Missouri.....	8	4,043,518
Pennsylvania.....	18	854,352
Tennessee.....	12	749,329
Other than porcelain-enameled, total.....	124	4,972,444
Georgia.....	8	621,893
Massachusetts.....	6	754,878
Tennessee.....	12	1,388,816
Coal and wood heating stoves:		
Enameled, total.....	96	7,290,498
Illinois.....	18	2,318,313
Indiana.....	9	674,845
Ohio.....	9	1,381,590
Tennessee.....	11	1,287,617
Other than porcelain-enameled, total.....	102	2,717,349
Tennessee.....	12	754,322
Gas cooking stoves and ranges:		
Porcelain-enameled:		
With insulated ovens, total.....	99	17,497,307
California.....	5	784,076
Illinois.....	25	5,365,027
Michigan.....	6	3,351,680
Ohio.....	19	4,447,317
With uninsulated ovens, total.....	94	13,835,279
California.....	6	1,557,756
Illinois.....	22	2,995,720
Michigan.....	5	2,942,056
New York.....	7	1,080,050
Ohio.....	16	898,885
Pennsylvania.....	11	1,432,310

STOVES AND RANGES, HEATING APPARATUS, STEAM FITTINGS 853

TABLE 4.—PRINCIPAL PRODUCTS, BY KIND, NUMBER OF ESTABLISHMENTS REPORTING, AND VALUE, BY STATES: 1931—Continued

[See note at head of table]

KIND AND STATE	Number of establishments	Value of products
Stoves, ranges, and water heaters—Continued.		
Gas room heaters:		
Porcelain-enameled, total.....	50	\$1, 217, 528
Ohio.....	10	528, 120
Other than porcelain-enameled, total.....	60	3, 295, 727
California.....	16	835, 831
Ohio.....	13	749, 757
Pennsylvania.....	10	805, 690
Gas water heaters, domestic supply, total.....	59	11, 935, 229
California.....	17	1, 493, 816
Michigan.....	5	1, 048, 695
Ohio.....	11	2, 723, 613
Pennsylvania.....	11	4, 315, 436
Kerosene cooking stoves and ranges:		
Porcelain-enameled:		
With insulated and uninsulated ovens, total.....	10	2, 542, 821
Ohio.....	3	566, 901
Combination (coal, wood, and gas) cooking stoves and ranges:		
Porcelain-enameled:		
With insulated and uninsulated ovens, total.....	46	2, 190, 473
Pennsylvania.....	12	766, 559
Other stoves, ranges, and heating apparatus, total ¹	73	2, 647, 278
Ohio.....	8	653, 504
Other cooking and heating apparatus and supplies:		
Fuel-oil burners, residence type (mechanical and natural draft):		
For furnaces, total.....	83	15, 170, 828
California.....	8	883, 010
Illinois.....	16	2, 836, 501
Iowa.....	6	504, 339
For stoves and ranges, total.....	28	3, 074, 269
Illinois.....	5	594, 255
Massachusetts.....	10	846, 645
Stokers, mechanical (domestic), total.....	27	1, 015, 699
Ohio.....	7	587, 392
Other cafeteria, hotel, and kitchen apparatus, total ²	69	4, 295, 260
Ohio.....	9	1, 043, 668
Pennsylvania.....	7	664, 600
Specialties (gauges, steam traps, reducing valves, thermostats, etc.), total.....	151	25, 221, 068
Connecticut.....	7	1, 452, 087
Illinois.....	23	5, 191, 039
Indiana.....	4	1, 745, 904
Massachusetts.....	20	2, 134, 605
Michigan.....	6	1, 255, 808
New York.....	20	640, 376
Ohio.....	17	2, 222, 298
Pennsylvania.....	17	1, 797, 786
Wisconsin.....	6	985, 034

¹ Laundry stoves, fruit driers, orchard heaters, sawdust burners, etc.

² Steam tables, coffee urns, waffle irons (except electric), iron cooking utensils, and other cafeteria, hotel, and kitchen apparatus.

STRUCTURAL AND ORNAMENTAL METAL WORK, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in assembling and fabricating structural steel for buildings and bridges, ornamental iron and steel work, balconies, bank fixtures, coal chutes, elevator enclosures, expanded metal for plaster and concrete work, iron fences, fire escapes, fire-proof moving-picture booths, gratings, portable steel buildings, etc. The figures presented in the following tables cover *shop work only*.

The phrase "not made in plants operated in connection with rolling mills" refers in some cases to plants having no connection with rolling mills and in other cases to plants under the same ownership as rolling mills but operated as independent units and not usually located adjacent to the rolling mills.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately.]

	Number of establish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and purchased electric energy	Value of products ¹	Value added by manu- facture ²
<i>United States</i>						
1931.....	1,302	37,510	\$47,874,684	\$131,648,905	\$238,033,284	\$106,384,379
1929.....	1,482	54,947	87,785,006	244,096,254	477,036,827	232,340,573
1927.....	1,284	52,302	84,575,048	243,446,072	440,376,360	196,930,288
1925.....	1,136	48,341	77,411,499	237,652,611	420,907,679	183,344,968
1923.....	1,056	51,591	80,832,876	225,487,217	406,117,279	180,630,062
1921.....	1,021	32,897	47,455,082	151,010,906	250,085,446	99,074,540
1919.....	1,146	43,062	59,920,132	168,800,715	294,962,419	126,161,704
1914.....	1,235	47,167	33,428,913	87,021,637	159,377,857	71,756,820
1909.....	1,089	40,234	26,422,372	76,659,426	133,241,379	56,581,953
1904.....	775	34,276	19,760,210	47,452,069	90,944,697	43,492,628
1899.....	697	24,903	13,538,779	38,053,135	66,927,305	28,874,170
Percent of increase or de- crease (—):						
1929-31.....	-12.1	-31.7	-45.5	-46.2	-50.1	-54.2
1927-29.....	15.4	4.9	3.8	0.5	8.3	18.0
1925-27.....	13.0	8.4	9.3	2.4	4.6	7.4
1923-25.....	7.6	-6.3	-4.2	5.4	3.7	1.5
1921-23.....	3.4	56.8	70.3	49.3	62.4	82.3
1919-21.....	-10.9	-25.2	-20.8	-10.5	-15.2	-21.5
1921-31.....	27.5	14.0	0.9	-12.8	-4.5	7.4
1919-29.....	29.3	25.0	46.5	45.0	61.7	84.2
1909-19.....	5.2	9.3	126.8	120.2	121.4	123.0
1899-1909.....	56.2	61.6	94.4	101.5	99.1	96.0

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931—Continued

(See note at head of table)

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>States, 1931</i>						
Alabama.....	13	560	\$556, 218	\$2, 074, 918	\$4, 078, 035	\$1, 403, 117
California.....	105	1, 882	2, 526, 111	5, 077, 748	9, 868, 329	4, 790, 681
Colorado.....	12	152	210, 336	699, 140	1, 226, 139	526, 999
Connecticut.....	18	196	279, 167	528, 904	1, 149, 726	620, 762
Delaware.....	4	21	32, 137	21, 037	69, 314	38, 277
District of Columbia.....	11	136	185, 125	334, 453	860, 702	526, 339
Florida.....	12	100	116, 570	173, 629	503, 234	329, 605
Georgia.....	5	182	126, 514	318, 191	595, 858	277, 667
Illinois.....	112	2, 934	3, 997, 363	10, 370, 488	19, 249, 723	8, 879, 235
Indiana.....	27	1, 497	1, 937, 068	5, 935, 875	9, 885, 866	3, 949, 991
Iowa.....	14	503	571, 571	2, 004, 632	3, 155, 640	1, 151, 008
Kansas.....	10	350	356, 594	1, 663, 057	2, 483, 078	820, 021
Kentucky.....	10	351	445, 472	774, 981	1, 908, 209	1, 133, 228
Louisiana.....	8	75	59, 937	224, 547	368, 709	144, 162
Maine.....	3	42	60, 398	113, 227	199, 950	86, 723
Maryland.....	14	416	500, 682	1, 733, 702	3, 040, 914	1, 307, 212
Massachusetts.....	69	939	1, 355, 838	3, 302, 532	6, 533, 950	3, 231, 418
Michigan.....	44	734	1, 029, 636	3, 206, 501	5, 701, 031	2, 494, 530
Minnesota.....	15	983	1, 267, 271	1, 502, 874	3, 879, 284	2, 376, 410
Missouri.....	41	833	1, 110, 669	2, 194, 380	5, 061, 751	2, 867, 365
Nebraska.....	5	286	359, 157	713, 142	1, 490, 252	777, 110
New Jersey.....	73	1, 041	1, 887, 311	5, 256, 282	10, 268, 997	5, 012, 715
New York.....	280	4, 380	6, 662, 074	14, 270, 911	29, 166, 744	14, 895, 833
North Carolina.....	7	178	151, 136	568, 180	725, 079	166, 899
Ohio.....	90	4, 712	6, 288, 815	15, 929, 287	29, 549, 150	13, 619, 863
Oklahoma.....	12	387	417, 107	1, 364, 934	2, 184, 072	819, 138
Oregon.....	9	109	157, 060	253, 107	587, 529	334, 422
Pennsylvania.....	148	8, 791	10, 497, 723	36, 950, 307	59, 830, 376	22, 880, 069
Rhode Island.....	5	106	141, 424	265, 494	561, 558	296, 064
Tennessee.....	11	380	460, 310	1, 319, 073	2, 641, 574	1, 322, 501
Texas.....	32	1, 232	1, 323, 109	3, 726, 266	6, 505, 100	2, 778, 834
Utah.....	6	49	53, 770	93, 916	268, 911	174, 995
Virginia.....	15	684	668, 104	2, 151, 364	3, 737, 763	1, 686, 399
Washington.....	16	389	470, 937	964, 972	1, 811, 153	846, 181
West Virginia.....	6	219	240, 576	1, 193, 559	1, 645, 264	451, 705
Wisconsin.....	29	958	1, 244, 605	3, 223, 093	6, 208, 169	2, 985, 076
Other States ³	11	123	136, 189	560, 136	1, 042, 061	481, 925

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.³ Arizona, 2 establishments; Arkansas, 1; Mississippi, 1; Montana, 1; New Hampshire, 2; South Carolina, 2; South Dakota, 1; Vermont, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
United States													
1931.....	37, 510	41, 935	40, 193	40, 335	39, 794	39, 256	38, 513	38, 273	37, 540	36, 293	34, 106	32, 512	31, 367
1929.....	54, 947	51, 952	51, 861	52, 323	53, 674	54, 738	55, 055	56, 600	57, 929	57, 704	57, 371	56, 076	54, 020
1925.....	48, 341	44, 204	44, 618	55, 200	46, 306	47, 757	48, 712	50, 470	50, 569	50, 734	51, 066	50, 653	50, 347
1919.....	43, 962	45, 471	43, 646	42, 231	41, 138	40, 614	40, 947	42, 694	44, 150	44, 909	47, 011	47, 686	47, 047
1914.....	47, 167	46, 876	45, 859	45, 744	46, 508	48, 279	49, 880	50, 214	50, 184	48, 012	46, 823	44, 202	42, 683
States, 1931													
Alabama.....	560	632	596	625	637	585	582	563	528	488	506	495	476
California.....	1, 852	2, 453	2, 332	2, 183	1, 994	1, 885	1, 738	1, 848	1, 844	1, 693	1, 576	1, 546	1, 492
Colorado.....	152	145	138	130	153	160	177	150	164	157	157	145	129
Connecticut.....	196	179	216	204	208	210	210	217	217	211	177	155	147
Delaware.....	21	20	19	19	22	22	21	22	22	22	23	23	23
Dist. of Columbia.....	136	135	141	141	140	148	143	139	138	139	131	119	118
Florida.....	100	121	125	112	92	101	89	89	85	96	88	100	99
Georgia.....	182	96	87	203	209	216	207	191	185	197	195	198	202
Illinois.....	2, 934	3, 428	3, 373	3, 362	3, 264	3, 050	3, 039	2, 787	2, 779	2, 715	2, 584	2, 498	2, 396
Indiana.....	1, 497	1, 664	1, 609	1, 564	1, 480	1, 422	1, 436	1, 468	1, 546	1, 563	1, 473	1, 425	1, 317
Iowa.....	503	523	524	537	488	525	538	545	535	501	460	441	407
Kansas.....	350	547	384	375	356	351	414	355	283	298	260	285	290
Kentucky.....	351	336	350	403	381	361	381	356	342	325	318	350	326
Louisiana.....	75	43	50	33	91	75	87	83	137	118	91	61	52
Maine.....	42	49	45	45	55	57	35	40	39	37	35	53	53
Maryland.....	416	535	502	547	520	469	371	379	365	334	337	330	307
Massachusetts.....	939	949	873	858	920	945	971	985	1, 048	1, 030	975	871	865
Michigan.....	734	723	715	731	744	776	792	901	795	712	636	658	652
Minnesota.....	953	992	1, 008	1, 015	959	959	993	988	1, 013	1, 067	1, 011	919	870
Missouri.....	833	854	850	856	888	854	894	872	848	826	820	706	724
Nebraska.....	286	312	309	283	287	296	311	304	302	283	261	232	251
New Jersey.....	1, 641	2, 023	1, 870	1, 854	1, 819	1, 721	1, 630	1, 665	1, 584	1, 510	1, 437	1, 337	1, 240
New York.....	4, 380	4, 858	4, 580	5, 007	4, 675	4, 550	4, 416	4, 398	4, 325	4, 208	4, 009	3, 753	3, 668
North Carolina.....	178	156	180	187	211	184	202	192	197	174	166	150	134
Ohio.....	4, 712	5, 434	4, 932	4, 968	5, 269	5, 349	5, 151	4, 972	4, 673	4, 511	4, 015	3, 779	3, 487
Oklahoma.....	387	433	450	427	433	401	377	394	378	354	343	337	318
Oregon.....	109	111	116	112	119	135	111	112	117	104	100	91	84
Pennsylvania.....	8, 791	9, 721	9, 439	9, 276	9, 033	9, 141	9, 010	9, 040	8, 802	8, 432	8, 067	7, 768	7, 753
Rhode Island.....	106	124	118	114	99	105	103	94	85	105	107	109	107
Tennessee.....	380	376	417	379	386	411	407	395	377	364	353	348	352
Texas.....	1, 232	1, 270	1, 314	1, 307	1, 358	1, 260	1, 233	1, 259	1, 306	1, 266	1, 117	1, 098	989
Utah.....	49	56	45	52	54	54	51	52	50	45	45	40	36
Virginia.....	684	719	773	735	689	683	642	686	705	712	659	610	591
Washington.....	389	471	373	392	426	499	391	353	339	305	325	364	432
West Virginia.....	219	212	229	224	226	229	236	238	229	215	206	194	189
Wisconsin.....	958	1, 101	1, 036	969	982	935	962	966	1, 033	957	878	846	789

TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, AND VALUE, 1931

				Total value
1. "Structural and Ornamental Metal Work, Not Made in Plants Operated in Connection With Rolling Mills" industry, all products, total value.....				\$238, 033, 284
2. Structural and ornamental metal work.....				219, 135, 803
3. Other products (not normally belonging to the industry).....				16, 529, 569
4. Receipts for custom and repair work.....				2, 367, 912
5. Structural and ornamental metal work made as secondary products in other industries, value.....				18, 080, 027
	Total value	QUANTITY REPORTED		Quantity not reported, value
		Tons (2,000 pounds)	Value	
Structural and ornamental metal work made in all industries:				
Total (sum of 2 and 5).....	\$237, 215, 830		\$184, 744, 433	\$52, 471, 397
Structural steel, fabricated:				
For buildings.....	80, 852, 266	1, 081, 902	73, 231, 685	7, 620, 581
For bridges.....	26, 892, 813	377, 641	26, 109, 123	783, 690
Other than for buildings and bridges.....	12, 164, 052	93, 163	6, 765, 274	5, 398, 778
Structural steel not distributed by kind.....	49, 537, 209	527, 236	36, 568, 647	12, 968, 562
Stairs and staircases.....	6, 685, 635	31, 767	4, 350, 093	2, 335, 542
Fire escapes.....	1, 903, 250	10, 605	1, 281, 139	622, 111
Wire mesh for reinforcing concrete.....	1, 985, 005	33, 566	1, 952, 780	32, 225
Woven-wire mesh for other purposes, except fence.....	645, 093	1, 455	412, 016	233, 952
Bars and rods for reinforcing concrete.....	9, 640, 596	175, 718	8, 381, 242	1, 259, 354
Metal lath.....	5, 508, 913	45, 921	3, 986, 731	1, 522, 182
Iron fences and gates, other than wire.....	7, 908, 556	70, 293	5, 159, 082	2, 749, 474
Grilles and railings.....	4, 925, 391	8, 642	2, 152, 447	2, 772, 944
Ornamental iron and steel.....	14, 098, 306	45, 029	8, 623, 597	5, 474, 409
Ornamental bronze work.....	7, 129, 795	4, 195	3, 560, 226	3, 569, 569
Other nonferrous ornamental work for buildings.....	1, 089, 274	1, 286	1, 642, 650	346, 624
Structural and ornamental work not reported by kind.....	2, 405, 648	85, 429	567, 401	1, 838, 247
Other structural and ornamental metal products.....	2, 043, 123			2, 943, 123

TIN CANS AND OTHER TINWARE NOT ELSEWHERE CLASSIFIED

[A preliminary report for this industry was issued under date of Aug. 8, 1932]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture, from purchased tin plate, of venthole-top, sanitary, and general-line cans and packages, ice-cream and milk cans, pails, boxes, and other tinware, except stamped ware. Tin-can departments operated by establishments which manufacture tin cans for use as containers for their own products are also included. (Establishments whose principal product is stamped tinware are classified in the "Stamped Ware, Enameled Ware, and Metal Stampings; Enameling, Japanning, and Lacquering" industry.)

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1904 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States," namely, Illinois, is, however, more important in the industry than any of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ¹
<i>United States</i>						
1931.....	199	25,271	\$27,977,932	\$149,121,078	\$223,634,271	\$74,513,193
1929.....	232	31,497	38,173,246	194,980,803	296,901,426	101,914,623
1927.....	236	29,721	35,000,822	169,421,340	253,478,691	84,057,351
1925.....	221	29,901	34,391,698	175,778,593	260,359,961	84,581,368
1923.....	241	30,511	32,816,010	135,980,053	215,071,256	79,991,203
1921.....	244	22,711	24,595,432	108,747,954	168,304,813	59,556,869
1919.....	301	34,386	34,493,399	165,170,736	233,954,000	68,793,264
1914.....	294	22,584	12,217,350	53,840,817	81,930,880	28,090,063
1909.....	318	19,754	8,675,257	39,272,571	58,814,323	19,541,752
1904.....	377	16,919	6,842,401	26,248,253	41,892,809	15,644,656
Percent of increase or decrease (—):						
1929-31.....	-14.2	-19.8	-26.7	-23.5	-24.7	-26.9
1927-29.....	-1.7	6.0	9.1	15.1	17.1	21.2
1925-27.....	6.8	-0.6	1.8	-3.6	-2.6	-0.0
1923-25.....	-8.3	-2.0	4.8	29.3	20.6	5.7
1921-23.....	-1.2	34.3	33.4	25.0	28.3	34.3
1919-21.....	-18.9	-34.0	-28.7	-34.2	-28.1	-13.4
1921-31.....	-18.4	11.3	13.8	37.1	32.9	25.1
1919-29.....	-22.9	-8.4	10.7	18.1	26.9	48.1
1909-19.....	-5.3	74.1	297.6	320.6	297.8	252.0
<i>States, 1931</i>						
California.....	21	2,292	\$2,647,682	\$20,307,092	\$30,172,626	\$9,865,534
Illinois.....	31	5,041	6,061,070	34,831,200	52,691,971	17,860,771
Maryland.....	15	3,707	3,692,096	16,912,764	25,127,095	8,214,331
Massachusetts.....	8	509	576,274	1,671,789	3,032,886	1,861,097
Missouri.....	7	884	890,035	3,071,344	5,093,004	2,021,660
New Jersey.....	8	1,736	2,020,945	9,549,816	15,381,468	5,831,052
New York.....	32	3,092	3,708,051	12,755,605	20,256,746	7,501,141
Ohio.....	16	2,017	2,234,064	9,537,001	14,422,806	4,865,865
Pennsylvania.....	14	1,594	1,507,734	8,952,499	12,737,479	3,784,980
Texas.....	4	443	399,222	1,677,093	2,555,279	878,186
Other States.....	43	3,956	4,240,759	29,834,875	42,162,911	12,328,036

¹ For 1923, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ No comparable data for years prior to 1904.

⁴ Colorado, 1 establishment; Florida, 1; Georgia, 2; Indiana, 3; Kentucky, 1; Louisiana, 4; Maine, 3; Michigan, 3; Minnesota, 2; Nebraska, 1; Oregon, 2; Rhode Island, 1; Tennessee, 1; Utah, 1; Vermont, 1; Virginia, 2; Washington, 6; West Virginia, 4; Wisconsin, 3.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931	25, 271	25, 136	25, 736	26, 204	26, 719	26, 294	26, 442	26, 341	27, 211	25, 635	23, 315	22, 515	<i>21, 646</i>
1929	31, 497	28, 868	29, 410	30, 409	31, 447	31, 438	32, 983	34, 067	34, 438	33, 858	32, 190	30, 588	<i>28, 271</i>
1925	29, 901	<i>26, 527</i>	27, 900	29, 240	29, 020	30, 083	30, 665	31, 990	32, 426	33, 244	30, 215	29, 071	27, 838
1919	34, 386	32, 644	32, 644	32, 201	<i>31, 855</i>	32, 878	34, 513	37, 312	38, 385	36, 825	35, 234	34, 104	34, 037
1914	22, 584	20, 485	21, 422	22, 137	23, 204	23, 505	24, 078	24, 134	24, 627	24, 940	22, 799	20, 139	<i>19, 538</i>
<i>States, 1931</i>													
California	2, 292	2, 335	2, 500	2, 465	2, 674	2, 536	2, 306	2, 550	2, 661	2, 121	1, 861	<i>1, 729</i>	1, 769
Illinois	5, 041	4, 871	5, 124	5, 255	5, 273	5, 350	5, 414	5, 305	5, 249	5, 109	4, 700	4, 515	<i>4, 390</i>
Maryland	3, 707	3, 904	3, 904	3, 966	4, 033	3, 862	3, 728	3, 766	3, 957	3, 657	3, 300	<i>3, 195</i>	3, 217
Massachusetts	509	501	538	551	526	504	524	509	<i>455</i>	459	495	493	458
Missouri	884	899	906	883	907	898	914	885	853	916	890	889	770
New Jersey	1, 736	1, 707	1, 724	1, 718	1, 687	1, 631	1, 800	1, 847	2, 314	1, 657	1, 595	1, 587	<i>1, 559</i>
New York	3, 092	3, 174	3, 195	3, 144	3, 211	3, 147	3, 209	3, 068	3, 086	3, 105	2, 885	2, 965	<i>2, 882</i>
Ohio	2, 017	1, 983	1, 984	1, 998	2, 042	2, 074	2, 099	2, 219	2, 214	2, 298	1, 943	1, 755	<i>1, 691</i>
Pennsylvania	1, 594	<i>1, 361</i>	1, 368	1, 618	1, 669	1, 636	1, 672	1, 750	1, 658	1, 715	1, 608	1, 582	<i>1, 491</i>
Texas	443	487	481	473	468	467	453	430	406	413	416	420	<i>389</i>

TABLE 3.—PRODUCTS, BY KIND, NUMBER, AND VALUE, FOR THE UNITED STATES: 1927 TO 1931

[The figures for 1931 and 1927 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 16, p. 9]

KIND	1931	1929	1927
1. "Tin Cans and Other Tinware not Elsewhere Classified" industry, all products, total value.....	\$223, 634, 271	\$296, 901, 426	\$253, 478, 691
2. Tin cans, utensils, etc.....	221, 066, 181	279, 962, 658	243, 020, 625
3. Other products (not normally belonging to the industry).....	2, 568, 090	10, 938, 768	10, 458, 066
4. Tin cans, utensils, etc., made as secondary products in other industries, value.....	3, 227, 110	3, 847, 105	4, 651, 683
Tin cans, utensils, etc., all industries: Total value (sum of 2 and 4).....	\$224, 293, 291	\$283, 809, 763	\$247, 672, 308
Venthole-top cans: Number.....	1, 446, 442, 428	1, 711, 691, 917	1, 180, 693, 414
Value.....	\$14, 454, 541	\$20, 734, 311	\$17, 751, 566
Sanitary cans, including sweetened-condensed-milk cans: Number.....	4, 851, 606, 135	5, 526, 838, 732	4, 286, 711, 908
Value.....	\$93, 767, 520	\$122, 020, 557	\$97, 742, 906
Ice-cream cans: Number.....	701, 233	1, 097, 826	694, 244
Value.....	\$825, 235	\$1, 819, 905	\$1, 285, 522
Dairy milk cans: Number reported: Number.....	831, 474	1, 704, 307	1, 175, 433
Value.....	\$2, 197, 163		
Number not reported, value.....	\$381, 606	\$3, 979, 393	\$4, 251, 153
Other miscellaneous cans and packages: Number reported: Number.....	3, 109, 046, 076	2, 908, 271, 900	2, 594, 688, 868
Value.....	\$99, 918, 322	\$120, 965, 466	\$95, 588, 445
Number not reported, value.....	\$8, 048, 141	\$8, 563, 409	\$23, 183, 681
Other tinware, except stamped, value.....	\$4, 700, 793	\$5, 726, 722	\$7, 869, 032

1 The figures for 1929 and 1927 are not comparable with those for 1931 because of a change in classification.
 2 Stamped tinware, other than tin cans, is classified in the "Stamped Ware, Enameled Ware, and Metal Stampings; Enameling, Japanning, and Lacquering" industry.

TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1931

[This table gives statistics for each State for which it is possible to publish separate figures without disclosing, exactly or approximately, the output of individual establishments. In some cases, however, certain of the "Other States" outrank some of the States for which separate figures are given]

KIND AND STATE	Number of establishments	Value	KIND AND STATE	Number of establishments	Value
Tin cans and other tinware not elsewhere classified, all industries, aggregate.....	1 222	\$224, 293, 291	Tin cans, etc.—Continued.		
Tin cans other than ice-cream cans and dairy milk cans, total.....	193	216, 188, 524	Ice-cream cans (Ill., Mich., Minn., and N.Y.).....	6	\$825, 235
California.....	17	29, 699, 190	Dairy milk cans, total.....	12	2, 578, 763
Illinois.....	34	52, 463, 619	Ill., Mich., and Wis.....	5	1, 451, 359
Maryland.....	15	24, 609, 217	Other States (Calif., Mass., Minn., Mo., and N.Y.).....	7	1, 127, 410
Massachusetts.....	8	2, 693, 970	Other tinware, except stamped, total.....	31	4, 700, 763
Missouri.....	6	4, 927, 531	California and Washington.....	3	110, 860
New Jersey.....	8	15, 353, 381	Illinois.....	4	233, 352
New York.....	30	18, 469, 728	Maryland, Ohio, and Pennsylvania.....	9	3, 682, 577
Ohio.....	16	14, 136, 890	New York.....	8	484, 738
Pennsylvania.....	12	9, 965, 841	Other States.....	7	189, 226
Texas.....	5	2, 905, 687			
Other States.....	42	40, 963, 470			

¹ Includes 23 establishments in other industries which made tin cans and other tinware as secondary products. The difference (20) between the aggregate and the sum of the several totals is due to the fact that in many cases two or more kinds of tin cans and other tinware are manufactured by the same establishment.

TIN PLATE AND TERNEPLATE

Description of the industry.—This industry, as defined for census purposes, consists in the coating of black plates with tin or with terne mixture (an alloy of tin and lead, in varying proportions). The manufacture of black plates is a rolling-mill operation, and 30 of the 31 tin-plate and terneplate establishments which reported for 1931 were operated as dipping departments of the mills which rolled the plates. The other establishment was operated by a tin-can manufacturer who did no rolling but purchased black plates for coating.

The numbers of wage earners, amounts of wages paid, cost of materials etc., are not reported separately for the dipping departments of rolling mills and other establishments which operate such departments, but are included in the respective items for the Steel Works and Rolling Mill Products and the Tin Cans and Other Tinware industries.

**TIN PLATE AND TERNEPLATE—PRODUCTION, BY KIND, QUANTITY, AND VALUE
AND EQUIPMENT BY NUMBER OF SETS AND CAPACITY: 1925-1931**

	1931	1929	1927	1925
Number of establishments.....	31	31	30	25
PRODUCTS				
Total value.....	\$142,697,503	\$213,084,656	\$193,894,382	\$190,917,778
Tin plate and terneplate:				
Total pounds.....	3,268,025,278	4,377,448,538	3,753,474,411	3,661,837,667
Total value.....	\$140,984,351	\$209,675,187	\$190,425,776	\$188,610,849
Tin plate:				
Total pounds.....	3,108,668,090	4,031,856,278	3,560,417,694	3,480,401,286
Total value.....	\$135,374,970	\$194,107,222	\$180,410,038	\$179,381,673
Coke plate:				
Pounds.....	3,071,029,750	3,958,323,114	3,499,540,357	3,424,407,663
Value.....	\$133,193,780	\$189,050,613	\$176,432,417	\$175,626,381
Charcoal plate:				
Pounds.....	37,638,340	73,533,164	60,877,337	55,993,623
Value.....	\$2,181,190	\$5,056,609	\$3,977,621	\$3,755,292
Terneplate, including long terne:				
Pounds.....	159,357,188	345,592,260	193,056,717	181,436,381
Value.....	\$5,609,381	\$15,567,965	\$10,016,738	\$9,229,176
Other products, including tin dross, scruff, scrap, etc., value.....	\$1,713,152	\$3,409,469	\$3,467,606	\$2,306,929
EQUIPMENT				
Number of dipping sets at end of year, total.....	482	509	517	568
Tin plate:				
Mechanical.....	387	370	356	525
Hand-fed.....	57	94	119	
Terneplate.....	33	45	42	43
Daily capacity, total pounds ¹	21,396,120	20,846,020	19,225,305	6,933,568
Tin plate.....	19,661,820	19,314,120	17,857,759	6,544,700
Terneplate.....	1,734,300	1,531,900	1,367,516	388,868
Number of sets building.....	3	2	9	

¹ Reported for 1931, 1929, and 1927 on 24-hour basis; for 1925, on single-turn basis.

TOOLS, NOT INCLUDING EDGE TOOLS, MACHINE TOOLS, FILES, OR SAWS

Description of the industry.—This industry classification embraces establishments engaged primarily in the manufacture of hand tools (not including power-driven hand tools) other than edge tools, files, and saws. The group covers so large a variety of tools that it is impossible to collect separate data for each type or kind, many of the manufacturers being unable to supply such data. Some of the principal types included are hammers, wrenches, pliers, and rules; shovels, forks, rakes, and hoes; picks and mattocks; and a variety of special tools used by jewelers, plumbers, stonecutters, ironworkers, etc. A special schedule, which provided for separate data on the more important types of tools, was used in canvassing the industry, but because of the inability of many of the manufacturers to supply detailed data, it is impossible to compile detailed product statistics.

The statistics for years prior to 1927 are not comparable with the 1929 and 1931 figures given in this report, because of the fact that more than 200 establishments were transferred from this industry to the "Machine Tool Accessories and Machinists' Precision Tools and Instruments" industry, established at the census for 1929. For this reason two sets of United States totals for 1927 are given in the table, one comparable with the figures for prior years and the other adjusted for comparison with those for 1929 and 1931.

SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	355	10,833	\$11,208,740	\$13,724,818	\$42,416,660	\$28,691,842
1929.....	534	19,305	25,808,289	32,110,507	90,462,032	67,351,525
1927 (adjusted for comparison with 1929) ³	405	16,447	20,941,443	28,057,884	76,607,237	48,549,353
1927.....	657	25,232	34,404,964	37,056,684	117,430,624	80,373,940
1925.....	663	25,346	34,294,113	39,023,373	121,263,093	82,239,720
1923.....	700	29,100	37,168,834	43,205,844	123,158,303	79,852,459
1921.....	714	19,453	22,643,499	25,550,113	70,523,416	44,973,303
1919.....	1,125	35,585	43,836,069	45,796,067	144,201,608	98,404,701
1914.....	661	18,866	10,216,885	12,235,260	33,892,511	21,657,242
1909.....	678	18,999	9,025,353	11,045,693	30,380,843	19,332,150
1904.....	594	11,643	6,048,587	7,249,567	20,407,372	13,157,805
1899.....	446	7,614	3,781,607	4,656,558	13,353,300	8,701,742
Percent of increase or decrease (-):						
1929-31.....	-33.5	-43.9	-56.6	-57.3	-57.4	-57.4
1927-29.....	31.9	17.4	23.2	14.4	29.8	38.7
1925-27.....	-0.9	-0.4	0.5	-5.0	-3.2	-2.3
1923-25.....	-5.3	-12.9	-7.7	-9.7	-1.5	2.9
1921-23.....	-2.0	49.6	64.1	69.1	74.6	77.8
1919-21.....	-36.5	-45.3	-48.3	-44.2	-51.1	-54.3
1921-31.....	-60.3	-44.3	-50.5	-46.3	-39.9	-36.2
1919-29.....	-52.5	-45.8	-41.1	-29.9	-31.0	-31.6
1909-19.....	65.9	122.4	385.7	314.5	374.6	409.0
1899-1909.....	52.0	110.1	138.7	137.3	127.4	122.2
<i>States, 1931</i>						
California.....	16	102	\$151,752	\$105,622	\$616,209	\$510,587
Connecticut.....	24	1,771	1,542,630	1,803,358	4,264,514	2,461,156
Illinois.....	47	1,010	1,226,338	1,608,298	5,158,104	3,549,806
Indiana.....	12	317	340,346	543,166	1,177,945	634,779
Iowa.....	8	135	140,953	220,396	674,614	454,218
Maryland.....	3	26	26,427	36,812	114,472	77,660
Massachusetts.....	38	1,066	1,024,169	1,259,043	4,641,517	3,382,474
Michigan.....	13	696	644,974	808,906	2,551,024	1,742,118
Minnesota.....	9	190	167,134	275,373	956,065	680,692
Missouri.....	9	145	143,757	370,909	1,187,686	816,777
New Jersey.....	16	557	687,642	392,901	1,714,040	1,321,139
New York.....	53	1,684	1,860,322	1,539,791	5,822,900	4,283,109
Ohio.....	24	1,197	1,319,185	2,070,517	5,669,171	3,568,654
Pennsylvania.....	36	1,084	972,311	1,275,960	3,520,751	2,244,791
Rhode Island.....	11	46	54,579	18,769	113,202	94,433
Texas.....	4	10	8,295	15,699	48,083	32,384
Vermont.....	4	160	165,558	270,494	909,887	639,393
Washington.....	5	15	17,674	14,672	52,705	38,033
Wisconsin.....	7	253	312,543	397,166	1,607,984	1,210,818
Other States ⁴	16	463	402,151	696,966	1,615,787	918,821

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ See "Description of the industry," second paragraph, p. 862.

⁴ Delaware, 2 establishments; Maine, 2; Mississippi, 1; New Hampshire, 3; North Carolina, 1; Oregon, 1; South Dakota, 1; Tennessee, 2; West Virginia, 3.

WIRE DRAWN FROM PURCHASED RODS

[A preliminary report on the production of wire and wire products was issued Nov. 25, 1932]

Description of the industry.—The Wire industry, as defined for census purposes, consists in the drawing of wire from purchased rods of iron, steel, copper, or other metals, and does not, therefore, include production by the wire-drawing departments of iron, steel, copper, and other rolling mills. The statistics in Tables 1 and 2 relate only to the Wire industry proper, but the detailed figures given in Tables 3 to 8 refer to all establishments reporting the production of wire, regardless of the industries in which classified. As will be seen by reference to Table 3, the output of wire and wire products by the wire departments of steel works and rolling mills exceeds that reported for mills in the wire industry proper. Some of the establishments in this industry manufacture various fabricated wire products of the same classes as those made by establishments in other industries. (See "Fabricated-wire products, all industries," below.)

Comparison with earlier years.—The figures for 1927 and earlier years, as given in Tables 1 and 2, are not strictly comparable with those for 1929 and 1931, for the reason that at the census for 1929 certain large establishments engaged primarily in rolling nonferrous metals and manufacturing nonferrous wire were transferred from the Wire industry to the Nonferrous Metals industry, and also because a somewhat different method of handling data on the custom drawing of nonferrous wire was adopted.

Wire production, all industries.—Table 4 shows the production of wire by all establishments reporting it, regardless of industry classification.

Fabricated-wire products, all industries.—In many cases establishments engaged in drawing wire also operate fabricating departments in which they manufacture nails, woven-wire fencing, insulated wire, and other fabricated-wire products. When these products are manufactured by establishments which do not draw their own wire, they are normally classified in other industries, particularly "Wirework Not Elsewhere Classified," and "Electrical Machinery, Apparatus, and Supplies." (See table 5.)

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
<i>United States</i>						
1931.....	82	14, 476	\$17, 179, 057	\$45, 187, 263	\$83, 370, 125	\$38, 182, 582
1929.....	81	22, 467	35, 110, 335	126, 182, 429	213, 997, 410	87, 814, 981
1927.....	73	19, 866	30, 038, 299	128, 092, 414	190, 709, 790	62, 617, 376
1925.....	68	18, 544	26, 927, 604	127, 250, 514	184, 462, 536	57, 212, 022
1923.....	64	21, 310	29, 861, 860	133, 883, 057	196, 364, 212	62, 481, 155
1921.....	61	14, 832	17, 809, 545	62, 705, 464	99, 945, 614	37, 240, 150

Footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
<i>United States—Continued</i>						
1919.....	66	19,741	\$29,289,667	\$102,813,591	\$162,151,236	\$59,337,645
1914.....	54	17,600	11,020,729	56,424,494	81,841,012	25,416,518
1909.....	56	18,084	10,315,722	60,542,931	84,486,518	23,943,587
1904.....	25	4,737	2,858,743	30,062,487	37,014,419	7,851,932
1899.....	29	1,603	859,645	7,014,319	9,421,238	2,406,919
<i>Percent of increase or decrease (—):</i>						
1929-31 ²	(%)	-35.6	-51.1	-64.2	-61.0	-56.5
1925-27.....	(%)	7.1	11.6	0.7	3.4	9.4
1923-25.....	(%)	-13.0	-0.8	-5.0	-6.1	-8.4
1921-23.....	(%)	43.7	67.7	113.5	96.5	67.8
1919-21.....	(%)	-24.9	-39.2	-39.0	-38.4	-37.2
1921-31.....	(%)	-2.4	-3.5	-27.9	-16.8	2.5
1919-29.....	(%)	13.8	19.9	22.7	32.0	48.0
1909-19.....	(%)	9.2	183.9	69.8	91.9	147.8
1899-1909.....	(%)	1,028.1	1,100.0	763.1	796.8	894.8
<i>States, 1931</i>						
Connecticut.....	5	666	\$847,916	\$1,508,899	\$3,912,184	\$2,403,285
Illinois.....	11	2,608	2,989,492	11,317,062	17,982,055	6,694,993
Indiana.....	5	1,828	1,966,219	5,541,720	9,975,875	4,434,155
Massachusetts.....	12	3,038	3,834,070	5,181,253	12,829,855	7,648,602
New Jersey.....	13	1,645	1,870,319	4,978,400	9,616,721	4,638,321
Ohio.....	7	1,116	1,508,152	3,513,226	6,846,814	3,333,583
Pennsylvania.....	11	1,451	1,701,128	5,112,763	8,644,533	3,531,770
Other States ³	18	2,124	2,461,761	8,033,940	13,562,088	5,528,148

¹ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.² The figures for 1927 are not strictly comparable with those for 1929 and 1931, and therefore no percentages are given for the period 1927-29. See "Comparison with earlier years," p. 894.³ Percent not computed where base is less than 100.⁴ Alabama, 1 establishment; California, 2; Maine, 1; Maryland, 1; Michigan, 3; Missouri, 1; New York, 5; Texas, 1; Wisconsin, 3.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See "Comparison with earlier years," p. 864.]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931	14,476	15,741	15,490	15,519	15,234	14,786	14,399	14,113	13,922	13,880	13,923	13,391	13,320
1929	22,407	21,326	21,587	21,731	22,117	22,641	23,011	23,483	23,933	24,439	24,764	21,384	19,194
1925	18,544	19,478	19,666	19,362	18,679	17,947	17,875	17,614	17,788	18,125	18,576	18,724	18,891
1919	19,741	21,043	20,808	19,993	19,038	18,988	18,656	19,838	21,016	21,282	17,335	18,796	20,039
1914	17,600	18,483	18,733	18,818	18,363	17,864	17,575	17,200	17,006	17,329	17,207	16,369	16,255
1909	18,084	17,763	18,147	17,604	17,131	17,432	17,862	17,864	17,673	18,206	18,580	19,091	19,841
<i>States, 1931</i>													
Connecticut	666	733	722	736	732	723	635	687	684	522	607	613	597
Illinois	2,608	3,012	2,955	2,897	2,842	2,639	2,560	2,573	2,327	2,318	2,422	2,506	2,432
Indiana	1,828	1,884	1,714	1,710	1,809	1,660	1,591	1,784	1,976	2,055	2,178	1,801	1,785
Massachusetts	3,038	3,304	3,247	3,259	3,104	3,062	3,126	2,907	2,952	2,885	2,805	2,909	2,900
New Jersey	1,645	1,764	1,887	1,723	1,734	1,705	1,601	1,555	1,631	1,615	1,565	1,497	1,462
Nevada	1,116	1,233	1,215	1,237	1,247	1,228	1,157	1,045	1,040	960	987	995	1,042
Ohio	1,451	1,741	1,623	1,755	1,502	1,517	1,560	1,497	1,268	1,326	1,256	1,238	1,127
Pennsylvania													

TABLE 3.—WIRE-DRAWING PLANTS, ALL INDUSTRIES—NUMBER OF ESTABLISHMENTS AND VALUE OF PRODUCTS, FOR THE UNITED STATES: 1931, 1929, AND 1927

	NUMBER OF ESTABLISHMENTS			VALUE OF PRODUCTS				
	1931	1929	1927	1931	1929	1927	PERCENT OF INCREASE OR DECREASE (—)	
							1929-1931	1927-1929
Total.....	152	147	132	\$267, 528, 359	\$585, 203, 016	\$478, 638, 020	-54.3	22.8
Wire and wire products, total value.....				255, 899, 356	553, 509, 538	462, 142, 821	-53.8	19.8
Wire industry (from purchased rods).....	82	81	73	77, 330, 841	192, 439, 704	183, 731, 487	-59.8	4.7
Wire departments of steel works and rolling mills.....	39	42	38	99, 318, 938	200, 197, 286	184, 515, 604	-50.4	8.5
Wire departments of brass and copper rolling mills and other establishments.....	31	24	21	170, 249, 577	160, 872, 488	193, 895, 730	-50.7	71.3
Products other than wire and wire products, value, and receipts for custom drawing.....				11, 629, 003	31, 693, 478	16, 495, 199	-63.3	92.1

¹ Not including data for fabricated-wire products of establishments which used purchased wire as material. (See table 5, p. 803.)

² See "Comparison with earlier years," p. 804.

TABLE 4.—WIRE—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, and 1927

[Ton, 2,000 pounds]

KIND	1931			1929	1927
	Total	Products of wire industry (from purchased rods)	Products of wire-drawing departments of iron and steel and nonferrous rolling mills		
All products, aggregate value.....	\$267, 528, 359	\$83, 370, 125	\$184, 158, 234	\$585, 203, 016	\$478, 638, 020
Wire, for sale and interplant transfer, value.....	\$99, 982, 926	\$33, 377, 187	\$66, 605, 739	\$283, 061, 494	\$210, 358, 331
Wire products made in wire-drawing plants, value (for total output in all industries, see table 5).....	\$155, 916, 430	\$43, 953, 654	\$111, 962, 776	\$270, 448, 044	\$251, 784, 490
Other products, value, and receipts for custom work.....	\$11, 629, 003	\$6, 039, 284	\$5, 589, 719	\$31, 693, 478	\$16, 495, 199
WIRE					
Iron and steel wire:					
Plain wire (all iron and steel wire, including that subsequently galvanized, otherwise coated, and cold-rolled), total tons.....	1, 865, 758	489, 510	1, 376, 248	3, 097, 239	2, 865, 223
For sale:					
Tons.....	531, 129	151, 705	379, 424	1, 074, 076	801, 045
Value.....	\$35, 661, 372	\$12, 144, 506	\$23, 516, 866	\$78, 992, 298	\$59, 553, 429

See footnotes at end of table.

TABLE 4.—WIRE—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, and 1927—Continued

KIND	1931			1929	1927	
	Total	Products of wire industry (from purchased rods)	Products of wire-drawing departments of iron and steel and nonferrous rolling mills			
WIRE—continued						
Iron and steel wire—Continued.						
Plain wire—Continued.						
Transferred for consumption in other plants of same company:						
Tons.....	72, 156	24, 095	48, 061	129, 567	106, 044	
Assigned value.....	\$4, 830, 850	\$1, 966, 416	\$2, 864, 434	\$9, 463, 755	\$8, 065, 414	
Produced and consumed in same works, tons.....	1, 262, 377	313, 614	948, 763	1, 891, 268	1, 958, 134	
Drawn on contract or custom basis from rods owned by others, tons.....	96	96	-----	2, 328	(¹)	
Galvanized wire, production, total tons.....	568, 767	139, 301	429, 466	843, 195	827, 249	
For sale and interplant transfer:						
Tons.....	171, 722	46, 396	125, 326	268, 793	249, 671	
Value.....	\$10, 968, 179	\$3, 944, 235	\$7, 018, 944	\$19, 656, 380	\$17, 034, 950	
Produced and consumed in same works, tons.....	397, 045	92, 905	304, 140	574, 402	577, 578	
Other coated wire, production, total tons.....	46, 888	38, 190	8, 698	57, 047	46, 753	
For sale and interplant transfer:						
Tons.....	43, 398	35, 073	8, 325	52, 242	44, 924	
Value.....	\$5, 163, 961	\$4, 370, 656	\$793, 305	\$8, 143, 031	\$6, 368, 147	
Produced and consumed in same works, tons.....	3, 490	3, 117	373	4, 805	1, 829	
Cold-rolled from drawn wire, production, total tons ²	27, 585	(³)	(³)	43, 028	152, 077	
For sale and interplant transfer:						
Tons.....	13, 726	(³)	(³)	28, 757	149, 803	
Value.....	\$2, 361, 291	(³)	(³)	\$4, 255, 839	\$18, 543, 650	
Produced and consumed in same works, tons.....	13, 859	13, 859	-----	14, 271	2, 274	
Copper wire, total production, pounds.....	455, 881, 987	(³)	(³)	1, 104, 497, 194	786, 563, 653	
For sale and interplant transfer:						
Pounds.....	187, 920, 561	36, 651, 739	151, 268, 822	544, 740, 189	491, 818, 866	
Value.....	\$22, 883, 779	\$4, 557, 461	\$18, 326, 318	\$118, 027, 983	\$77, 090, 340	
Produced and consumed in same works, pounds.....	242, 389, 775	69, 401, 095	172, 988, 680	407, 996, 224	294, 744, 787	
Drawn on contract or custom basis from rods or bars owned by others, pounds.....	25, 571, 651	(³)	(³)	151, 760, 781	(¹)	
Brass and bronze wire, total production, pounds.....	53, 097, 552	4, 446, 808	48, 650, 744	92, 386, 093	* 63, 929, 247	
For sale:						
Pounds.....	43, 628, 853	3, 312, 644	44, 718, 561	81, 482, 823	* 56, 534, 689	
Value.....	\$7, 293, 389			\$72, 229, 205	\$19, 091, 773	* \$10, 907, 363
Transferred for consumption in other plants of same company:						
Pounds.....	4, 402, 352	\$675, 291	\$7, 229, 205	5, 322, 571	* 4, 308, 879	
Assigned value.....	\$611, 107			\$1, 240, 719	* \$785, 762	
Produced and consumed in same works, pounds.....	5, 066, 347	1, 134, 164	3, 932, 183	5, 580, 699	* 3, 085, 679	
Other nonferrous-metal wire, total production, pounds.....	26, 780, 761	(³)	(³)	48, 508, 080	* 41, 325, 539	
For sale and interplant transfer:						
Pounds.....	26, 750, 195	3, 806, 982	22, 943, 213	48, 487, 180	* 34, 116, 973	
Value.....	\$10, 213, 998	\$3, 595, 099	\$6, 618, 899	\$23, 589, 716	* \$12, 000, 276	
Produced and consumed in same works, pounds.....	30, 566	(³)	(³)	20, 900	* 7, 208, 566	

¹ No data.² For 1931 and 1929, wire cold-rolled from drawn wire only; for 1927, wire cold-rolled from drawn wire and from materials direct from hot-rolling mills. For production of cold-rolled strip steel, see table 5, p. 836, of Steel-Works and Rolling-Mill Products report.³ Not shown separately to avoid disclosing, exactly or approximately, the output reported by individual establishments.⁴ Brass wire only. See footnote 5.⁵ Includes data for bronze wire.

TABLE 5.—WIRE PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927

[This table covers the production of wire products in all industries except Needles, Pins, Hooks and Eyes, and Snap Fasteners]

[Keg, 100 pounds. Ton, 2,000 pounds]

KIND	1931	1929	1927
Wire products, total value.....	\$304,803,016	\$636,926,537	\$487,325,802
Products of wire-drawing establishments.....	\$155,916,430	\$270,448,044	\$251,784,490
Products of establishments using purchased wire as a material.....	\$148,886,586	\$366,478,493	\$235,541,312
Iron and steel wire products, total value.....	\$163,086,442	\$288,451,853	\$252,221,556
Nails, brads, and spikes, total:¹			
Kegs.....	8,177,139	13,600,673	14,819,159
Value.....	\$22,531,504	\$44,934,890	\$48,002,203
Bright, not including galvanized or other coated:			
Kegs.....	6,469,423	10,302,272	(²)
Value.....	\$16,547,768	\$31,738,404	(²)
Galvanized:			
Kegs.....	583,957	1,008,176	(²)
Value.....	\$2,674,003	\$5,385,058	(²)
Cement coated:			
Kegs.....	1,123,759	2,290,225	(²)
Value.....	\$3,309,733	\$7,811,428	(²)
Tacks, wire:			
Pounds.....	2,620,399	6,540,281	7,134,501
Value.....	\$218,325	\$640,072	\$690,796
Staples, wire:			
Pounds.....	44,863,149	58,878,705	49,379,225
Value.....	\$1,384,732	\$2,342,378	\$1,596,600
Barbed wire, plain and coated:			
Tons.....	161,813	221,809	201,708
Value.....	\$8,280,455	\$13,824,143	\$12,973,239
Rope or cable, not insulated:			
Tons.....	57,289	153,304	
Value.....	\$18,411,707	\$40,876,871	
Strand, galvanized:			
Tons.....	35,580	48,565	
Value.....	\$3,283,509	\$5,617,900	\$46,916,232
Poultry netting:			
Tons.....	31,988	46,733	
Value.....	\$4,164,838	\$7,536,147	
Woven-wire fence, except poultry netting:			
Tons.....	242,295	365,505	
Value.....	\$17,897,171	\$31,041,091	\$40,010,614
Fly screening:			
Pounds.....	31,718,816	64,728,176	
Value.....	\$4,622,679	\$9,942,027	
Other wire cloth:			
Quantity reported:			
Pounds.....	24,940,168	31,106,928	
Value.....	\$4,176,747	\$4,995,659	\$14,225,293
Quantity not reported, value.....		\$1,569,318	
Concrete-reinforcement wire:			
Tons.....	140,131		
Value.....	\$8,177,315		
Wire lath:			
Tons.....	10,132	3 138,830	(²)
Value.....	\$798,239	\$11,786,472	3 \$9,170,536
Other woven wire:			
Tons.....	17,702		
Value.....	\$4,723,466		
Bale ties:			
Pounds.....	109,340,434	148,474,426	129,828,911
Value.....	\$3,592,828	\$5,088,035	\$4,580,426
Wire springs, total value.....	\$26,685,588	\$47,903,132	\$32,186,970
Furniture and other upholstery (including mat-			
tress) springs, value.....	\$15,093,268	\$25,344,315	
Valve springs for internal-combustion engines,			
value.....	\$1,884,702	\$3,314,728	
Miscellaneous spiral springs, value.....	\$5,628,510	\$10,954,730	(²)
Other wire springs, value.....	\$2,878,394	\$5,181,930	
Flat springs (wire and strip steel), coiled, value.....	\$1,300,714	\$3,107,429	

See footnotes at end of table.

WIRE DRAWN FROM PURCHASED RODS

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TABLE 5.—WIRE PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927—Continued

KIND	1931	1929	1927
Wire products—Continued.			
Iron and steel wire products—Continued.			
Automobile skid chains:			
Quantity reported:			
Tons.....	22,375	31,445	
Value.....	\$5,284,627	\$8,987,494	
Quantity not reported, value.....	\$702,211	\$2,503,907	
Other chain, value.....	\$1,558,123		
Welding wire, including electrodes:			
Quantity reported:			
Pounds.....	20,262,827	\$42,872,319	
Value.....	\$1,274,752		
Quantity not reported, value.....	\$1,514,767		
Other fabricated iron and steel wire products, value.....	\$23,802,859		\$41,868,597
Nonferrous wire products:			
Fly screening:			
Copper:			
Pounds.....	2,697,241	4,993,338	
Value.....	\$779,830	\$1,768,291	
Other metals:			
Pounds.....	7,131,884	10,210,589	
Value.....	\$2,380,646	\$3,336,196	
Fourdrinier and cylinder wire cloth:			
Pounds.....	1,899,155	3,107,604	
Value.....	\$3,081,552	\$4,704,950	\$8,796,077
Other wire cloth:			
Copper:			
Pounds.....	386,184	1,168,029	
Value.....	\$150,814	\$587,986	
Other metals:			
Pounds.....	1,238,709	1,450,097	
Value.....	\$1,083,838	\$683,489	
Copper strand, not insulated:			
Pounds.....	59,050,913	92,395,338	
Value.....	\$7,383,190	\$18,016,600	
Other fabricated nonferrous wire products, except insulated wire:			
Copper, value.....	\$4,040,375	\$1,905,640	
Brass, value.....	\$1,192,221	\$2,471,938	
Other metals, value.....	\$437,812	\$1,747,501	\$3,853,392
Fabricated wire products not distributed above, value.....	\$390,984		\$1,435,852
Insulated wire and cable, total value.....	\$120,789,312	\$312,592,093	\$210,047,947
Rubber-insulated:			
Lighting and power circuit:			
Braided, value.....	\$22,675,481	\$51,130,555	\$46,538,829
Leaded, value.....	\$8,859,403	\$23,037,318	\$13,103,230
Telephone, value.....	\$6,648,539	\$11,742,261	\$8,863,029
Flexible cords (rubber insulation, cotton, and silk covered), value.....	\$7,717,411	\$20,189,102	\$11,401,221
Cotton-insulated, weatherproof, value.....	\$13,055,853	\$42,011,680	\$25,803,928
Paper-insulated:			
Lighting and power circuit and telephone and telegraph cable (including submarine), value.....	\$37,020,651	\$96,227,728	\$59,624,158
Varnished-cambric insulated, value.....	\$3,389,296	\$7,209,890	\$9,373,242
Magnet:			
Cotton and silk covered, value.....	\$4,877,549	\$18,777,088	\$14,093,786
Enameled, value.....	\$6,157,775	\$30,641,417	\$6,132,838
Cotton-insulated slow-burning, and asbestos-insulated, value.....	\$2,530,446		
Other insulated wire and that not distributed by kind of insulation, value.....	\$7,856,818	\$11,625,054	\$15,053,686

¹ For cut nails and spikes and cut tacks, see table 5, p. 836, Steel-works and Rolling-mill Products.

² No data.

³ Not strictly comparable with figures for 1931, for the reason that data for concrete-reinforcement wire and wire lath were not called for separately and specifically prior to 1931.

⁴ Not strictly comparable with figures for 1931, for the reason that data for welding wire were not called for separately and specifically prior to 1931.

⁵ Some of the more important miscellaneous fabricated wire products included in this item are wireguards, garment hangers, partitions and grilles, lamp-shade frames, kitchen wire goods, baskets, cages, and florists' designs.

⁶ The 1927 item for "Other insulated wire and that not distributed by kind of insulation" includes \$3,956,362, value of rubber-insulated wire and cable not distributed.

TABLE 6.—ESTABLISHMENTS MANUFACTURING WIRE AND SPECIFIED FABRICATED-WIRE PRODUCTS, ALL INDUSTRIES—NUMBER, FOR THE UNITED STATES: 1931

KIND	TOTAL		1931			
	1931	1929	Wire mills	Wire departments of iron and steel rolling mills	Wire departments of non-ferrous rolling mills and other establishments	Establishments manufacturing from purchased wire
Iron and steel wire:						
Plain wire.....	96	97	58	38		
Galvanized wire.....	52	52	22	30		
Other coated wire.....	27	30	19	8		
Iron and steel wire products:						
Bale ties.....	29	33	3	13		13
Concrete-reinforcement wire.....	33	(1)	1	8		24
Rope or cable, not insulated.....	22	25	9	4		9
Strand, galvanized.....	26	23	10	8	1	7
Wire nails, brads, and spikes.....	64	61	12	27		26
Wire tacks and staples.....	50	66	10	21		19
Fly screening, except nonferrous.....	21	22	2	2		17
Other wire cloth, except nonferrous.....	29	31	3	2		24
Barbed wire.....	33	41	7	23		3
Poultry netting.....	19	22	7	7		5
Woven-wire fence (except poultry netting).....	58	65	6	19		33
Welding wire.....	28	(1)	6	3		19
Wire springs.....	134	90	6	2		126
Automobile skid chains.....	24	20				24
Nonferrous wire:						
Copper wire, plain.....	43	39	20	6	17	
Brass and bronze wire.....	32	20	13	4	15	
Wire of other metals and alloys.....	25	20	11		14	
Nonferrous-wire products:						
Fly screening, nonferrous.....	19	23	3	2		14
Fourdrinier and cylinder wire cloth.....	20	21				20
Other wire cloth, nonferrous.....	21	21	1	1		19
Copper strand, not insulated.....	15	20	3	1	9	
Insulated wire.....	93	98	12	2	11	68

¹ No data.

TABLE 7.—WIRE-DRAWING EQUIPMENT (ACTIVE ESTABLISHMENTS), BY KIND, NUMBER, AND CAPACITY, ALL INDUSTRIES: 1931

[Ton, 2,000 pounds]

KIND	Frame or bench equipment—number of blocks	CONTINUOUS EQUIPMENT			Total annual capacity (24-hour basis), tons, based on rod-ripping equipment
		Total number of continuous machines ¹	Machines for which drafts were reported		
			Number of machines ¹	Number of drafts	
Wire drawing blocks:					
Rod, total.....	8,431	620	410	2,402	5,699,530
Wire industry (wire drawn from purchased rods).....	2,871	170	160	971	1,696,829
Wire departments of iron and steel rolling mills.....	5,287	333	141	582	3,388,598
Wire departments of nonferrous-metal rolling mills.....	273	117	109	849	614,103
Redrawing, total.....	12,234	980	806	6,204	
Fine wire (below no. 20), total.....	10,952	3,385	3,064	20,570	

¹ Some of the wire manufacturers failed to

¹ Some of the wire manufacturers failed to report drafts.

TABLE 8.—EQUIPMENT (ACTIVE ESTABLISHMENTS) FOR MANUFACTURING FABRICATED-WIRE PRODUCTS, ALL INDUSTRIES—SELECTED CLASSES, BY NUMBER AND CAPACITY: 1931 AND 1929

[Annual capacity on 24-hour basis. Keg, 100 pounds. Ton, 2,000 pounds]

CLASS	TOTAL		1931			
	1931	1929	Wire industry	Wire departments of iron and steel rolling mills	Wire-work industry	Nails, spikes, etc., not made in wire departments of rolling mills or in wire industry
Wire-nail machines:						
Number.....	5,675	6,708	975	4,201		499
Annual capacity, kegs.....	24,972,439	28,118,212	3,525,760	20,180,020		1,266,669
Barbed-wire machines:						
Number.....	1,100	1,338	167	908	25	
Annual capacity, tons.....	609,811	685,535	90,090	508,951	10,770	
Woven-wire fence machines:						
Number.....	774	840	115	368	291	
Annual capacity, tons.....	1,061,189	1,160,947	167,345	567,700	326,144	
Poultry-netting machines:						
Number.....	243	296	121	79	43	
Annual capacity, tons.....	105,711	116,497	72,711	20,000	13,000	
Stands for cold-rolling machines:						
Number.....	935	1,184	697	288		
Annual capacity, tons.....	308,338	267,537	112,287	196,051		

WIREWORK NOT ELSEWHERE CLASSIFIED

[A preliminary report on the production of wire and wire products was issued Nov. 25, 1932]

Description of the industry.—This classification embraces establishments engaged in the manufacture, from purchased wire, of commodities such as woven-wire fencing, fly screening, wire cloth and netting, Fourdrinier and cylinder wire cloth, wire rope and cable, barbed wire, tire chains, bale ties, concrete-reinforcing wire, welding wire, wire guards, partitions and grille work, wire trays and baskets, kitchen wire goods, and wire springs. It does not cover plants which manufacture insulated wire from purchased plain wire, such plants being classified in the Electrical Machinery, Apparatus, and Supplies industry.

Detailed statistics of products.—Fabricated-wire products are manufactured to a considerable extent in departments of wire-drawing plants. The total output of such products, as reported by all classes of establishments in which they are manufactured, is shown in detail in Table 5 of the report for Wire Drawn from Purchased Rods (p. 868).

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	494	17,226	\$17,381,566	\$40,307,517	\$86,693,807	\$46,386,290
1929.....	547	22,388	27,912,231	68,144,047	146,805,049	78,661,002
1927.....	512	21,697	26,439,144	63,093,221	128,555,783	65,442,562
1925.....	462	19,268	23,834,812	59,604,126	115,428,872	55,824,746
1923.....	443	16,783	19,340,549	52,279,608	100,248,108	47,968,500
1921.....	413	11,485	13,314,017	37,039,301	66,384,507	29,345,200
1919.....	558	15,224	15,505,992	50,754,070	90,549,245	39,795,175
1914.....	552	12,126	6,719,222	24,113,708	41,789,394	17,675,680
1909.....	611	12,348	6,331,158	24,393,914	41,637,952	17,544,038
1904.....	649	13,379	6,069,869	17,856,211	33,038,495	15,182,284
1899.....	596	9,142	3,894,001	10,813,342	19,840,382	9,027,040
Percent of increase or decrease (—):						
1929-31.....	-9.7	-23.1	-37.7	-40.8	-40.9	-41.0
1927-29.....	6.8	3.2	5.6	8.0	14.2	20.2
1925-27.....	10.8	12.6	10.9	5.9	11.4	17.2
1923-25.....	4.8	14.8	23.2	14.0	15.1	16.4
1921-23.....	7.3	46.1	45.3	41.1	51.0	63.5
1919-21.....	-26.0	-24.6	-14.1	-27.0	-26.7	-26.3
1921-31.....	19.6	50.0	30.6	8.8	30.6	58.1
1919-29.....	-2.0	47.1	80.0	34.3	62.1	97.7
1909-19.....	-8.7	23.3	144.9	108.1	115.9	126.8
1899-1909.....	2.5	35.1	62.6	125.6	111.4	94.3

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>States, 1931</i>						
California.....	28	576	\$616, 114	\$1, 663, 140	\$3, 695, 472	\$2, 032, 332
Connecticut.....	24	1, 215	1, 258, 871	2, 047, 375	4, 807, 648	2, 760, 273
Illinois.....	58	1, 611	1, 633, 229	4, 259, 987	9, 122, 365	4, 862, 378
Indiana.....	18	775	666, 066	2, 027, 940	3, 442, 592	1, 414, 652
Iowa.....	6	131	135, 411	398, 593	742, 228	343, 035
Maryland.....	16	255	270, 963	1, 305, 926	2, 324, 739	1, 018, 813
Massachusetts.....	21	944	1, 006, 950	1, 816, 787	3, 885, 571	2, 068, 784
Michigan.....	38	4, 280	4, 116, 994	8, 200, 860	17, 366, 496	9, 165, 036
Minnesota.....	8	136	135, 606	281, 522	645, 094	303, 572
Missouri.....	11	523	479, 273	1, 570, 881	3, 974, 423	2, 103, 542
New Jersey.....	30	710	983, 241	1, 414, 041	3, 802, 916	2, 388, 875
New York.....	93	1, 907	2, 100, 786	4, 177, 167	9, 987, 962	5, 810, 795
Ohio.....	40	1, 011	1, 306, 428	3, 268, 687	7, 089, 082	3, 820, 395
Pennsylvania.....	54	2, 311	1, 968, 792	6, 217, 626	12, 739, 291	6, 521, 665
Rhode Island.....	5	41	48, 160	82, 496	172, 228	89, 732
Texas.....	6	33	38, 541	138, 243	241, 920	103, 677
Wisconsin.....	17	257	297, 584	344, 849	1, 007, 307	662, 458
Other States.....	21	510	312, 551	791, 397	1, 646, 473	855, 076

¹ For detailed statistics covering production of fabricated-wire products in all industries in which such products are manufactured, see Table 5, p. 868, of report for Wire Drawn from Purchased Rods.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Alabama, 2 establishments; Colorado, 1; Kansas, 2; Kentucky, 2; Louisiana, 1; Nebraska, 2; Oklahoma, 1; Oregon, 2; South Carolina, 1; Tennessee, 3; Virginia, 2; Washington, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	17, 226	17, 833	18, 427	18, 959	18, 301	17, 872	17, 141	16, 658	16, 814	16, 347	16, 117	16, 084	16, 159
1929.....	22, 388	21, 951	22, 967	23, 023	22, 768	22, 167	22, 192	22, 589	22, 640	23, 897	22, 883	21, 301	20, 472
1925.....	19, 268	18, 650	18, 929	19, 280	19, 330	19, 194	18, 645	18, 718	18, 920	19, 385	20, 249	20, 134	19, 776
1919.....	15, 224	14, 996	14, 964	15, 048	14, 826	14, 903	15, 108	15, 468	15, 045	15, 435	15, 331	15, 623	15, 941
1914.....	12, 126	12, 544	12, 648	12, 756	12, 744	12, 558	12, 106	11, 608	11, 650	11, 707	11, 825	11, 756	11, 610
1909.....	12, 348	11, 571	11, 979	12, 153	12, 251	12, 257	12, 218	11, 911	12, 163	12, 488	12, 871	13, 095	13, 229
<i>States, 1931</i>													
California.....	576	624	641	644	616	597	568	565	562	565	537	472	519
Connecticut.....	1, 215	1, 212	1, 234	1, 246	1, 259	1, 221	1, 228	1, 213	1, 203	1, 232	1, 207	1, 189	1, 131
Illinois.....	1, 611	1, 624	1, 614	1, 747	1, 733	1, 709	1, 606	1, 440	1, 640	1, 545	1, 575	1, 483	1, 419
Indiana.....	775	810	836	898	861	833	723	711	705	705	764	732	786
Iowa.....	131	152	162	149	162	165	138	134	120	103	102	90	96
Maryland.....	255	248	277	279	263	255	257	249	240	240	238	234	278
Massachusetts.....	944	940	952	962	970	966	924	918	937	928	947	940	943
Michigan.....	4, 280	4, 113	4, 664	5, 085	5, 209	4, 954	4, 718	4, 237	4, 154	3, 561	3, 104	3, 530	4, 033
Minnesota.....	136	130	120	145	131	144	145	145	148	133	141	128	116
Missouri.....	523	577	556	555	548	535	513	510	505	500	494	489	488
New Jersey.....	710	741	728	718	720	741	695	703	707	712	706	690	679
New York.....	1, 907	2, 024	1, 948	1, 918	1, 825	1, 773	1, 740	1, 748	1, 840	2, 060	2, 203	2, 033	1, 766
Ohio.....	1, 011	976	990	1, 108	1, 064	1, 090	1, 114	1, 039	1, 013	983	938	925	896
Pennsylvania.....	2, 311	2, 791	2, 526	2, 518	1, 966	1, 963	1, 902	2, 204	2, 294	2, 332	2, 439	2, 446	2, 355
Rhode Island.....	41	48	46	45	39	39	30	39	40	43	44	42	42
Texas.....	33	27	30	31	32	32	32	36	41	41	35	34	27
Wisconsin.....	257	271	286	294	282	280	249	262	232	238	229	235	230

WROUGHT PIPE, WELDED AND HEAVY RIVETED, NOT MADE IN PLANTS OPERATED IN CONNECTION WITH ROLLING MILLS

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of boiler tubes, oil-country casing, tubing, and pipe, other black and galvanized wrought pipe, electrical conduit, and heavy-riveted pipe. The production of wrought pipe in rolling mills, however, greatly exceeds that in the Wrought Pipe industry. The production of seamless tubes from pierced billets is classified in the Rolling Mill industry. Detailed statistics covering the total production of wrought pipe in all industries are given in Table 5 (p. 836) of the report for Steel Works and Rolling Mill Products.

The phrase "not made in plants operated in connection with rolling mills" refers to production in plants operated entirely independently of rolling mills, although in some cases under the same ownership.

SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931

[Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States," namely, Wisconsin, is, however, more important in the industry than any of the States shown separately.]

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manu- facture ¹
<i>United States</i>						
1931.....	51	8,045	\$9,880,930	\$42,201,098	\$75,040,570	\$32,749,481
1929.....	50	11,417	18,762,303	70,120,941	124,658,966	51,538,025
1927.....	44	11,083	16,096,001	55,778,864	93,183,341	42,407,477
1925.....	42	10,871	17,156,545	59,142,447	94,695,553	35,553,106
1923.....	53	10,633	17,704,699	57,955,845	90,928,189	32,887,844
1921.....	57	8,728	11,234,413	37,093,041	56,662,278	19,569,237
1919.....	50	10,426	14,919,676	51,155,853	81,869,115	30,713,462
1914.....	36	8,845	5,750,360	26,295,788	37,655,229	11,369,441
1909.....	28	6,817	3,963,075	22,941,909	30,886,270	7,944,381
1904.....	27	5,416	2,472,721	12,746,619	17,400,912	4,654,293
1899.....	19	5,536	2,495,898	15,523,858	21,292,043	6,768,185
Percent of increase or decrease (—):						
1929-31.....	(²)	-29.5	-47.3	-39.7	-39.8	-40.0
1927-29.....	(²)	3.0	16.8	25.7	27.0	28.6
1925-27.....	(²)	2.0	-6.4	-5.7	3.7	19.3
1923-25.....	(²)	2.2	-3.1	2.0	4.3	8.2
1921-23.....	(²)	21.8	57.6	56.3	60.3	67.9
1919-21.....	(²)	-16.3	-24.7	-27.5	-30.8	-36.3
1921-31.....	(²)	-7.8	-12.0	14.0	32.4	67.4
1919-29.....	(²)	9.5	25.8	37.1	52.3	77.6
1909-19.....	(²)	52.9	278.5	128.0	165.1	286.6
1899-1909.....	(²)	23.1	58.8	47.8	45.1	37.7
<i>States, 1931</i>						
Illinois.....	4	700	\$949,064	\$3,045,669	\$6,180,174	\$3,134,505
Michigan.....	6	476	583,116	1,175,305	2,803,121	1,627,816
New Jersey.....	3	62	89,770	188,299	380,193	191,894
Pennsylvania.....	9	3,260	3,189,048	12,332,960	20,905,806	8,572,846
Other States ⁴	29	3,547	5,078,932	25,548,865	44,771,285	19,222,420

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9. For total production of wrought pipe in 1929, 1927, and 1925 by all plants, including rolling mills, see table 5, p. 836, of report for Steel Works and Rolling Mill Products.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Arizona, 2 establishments; California, 15; Indiana, 1; Massachusetts, 1; New York, 2; Ohio, 6; Utah, 1, and Wisconsin, 1.

Group 12.—NONFERROUS METALS AND THEIR PRODUCTS

THE GROUP AS A WHOLE

This group comprises industries engaged in the production of non-ferrous metals from the ores or from scrap metals; in the refining or alloying of such metals; and in the manufacture, from these metals or alloys as basic materials, of finished products or products for use in further manufacturing processes.

The principal metals or ores which form the basic materials used in these industries are copper, lead, zinc, tin, gold, silver, and aluminum. It should be noted, however, that these same basic metals are used to a large extent in certain industries assigned to other groups; for example, "Electrical Machinery, Apparatus, and Supplies" and other industries of the "Machinery, Not Including Transportation Equipment" group. A number of industries in Groups 11 and 16 also manufacture various commodities made wholly or in part from metals other than iron and steel.

Since the metals and alloys produced by the basic industries of Group 12 are used as materials by other industries in the group, there are considerable amounts of duplication in the total cost of materials and the total value of products for the group as a whole. (See Ch. I, sec. 18.)

The basic industries which extract the metals from the ore or refine or alloy them usually add relatively little to the value of the raw materials which they use, while the more highly elaborated manufacturing processes employed by the industries which use these metals and alloys as materials add very considerably to their value.

Summary statistics for the group as a whole, by subgroups and industries, are presented in the table beginning on page 876; and detailed reports for the individual industries, all of which have been published separately in pamphlet form, will be found on pages 879 to 925.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1921 TO 1931

INDUSTRY	Cen- sus year	Num- ber of estab- lish- ments	Wage earners (aver- age for the year)	Wages	Cost of mate- rials, con- tainers, fuel, and pur- chased elec- tric energy	Value of products	Value added by manu- facture ¹
Aggregate for the group.	1931	6,310	208,855	\$240,177,110	\$802,187,480	\$1,449,261,502	\$587,074,082
	1929	7,522	314,741	443,466,623	2,465,444,198	3,597,057,717	1,131,613,519
	1927	6,761	272,667	383,184,596	1,783,213,469	2,677,107,246	893,893,777
	1925	7,009	276,616	382,652,366	1,948,438,054	2,839,550,465	891,112,411
	1923	7,501	297,798	395,078,970	1,767,637,612	2,637,159,840	869,522,228
	1921	7,853	212,680	256,892,785	886,264,843	1,408,059,444	521,794,601
Smelting and refining, total.	1931	237	21,906	27,063,949	401,151,441	484,681,787	83,530,346
	1929	250	36,046	56,447,479	1,344,040,270	1,519,641,736	175,601,466
	1927	228	34,087	50,514,720	935,014,146	1,086,152,537	151,133,947
	1925	238	37,194	54,793,129	1,070,193,357	1,244,505,806	174,312,639
	1923	205	37,634	55,095,282	924,227,805	1,060,440,314	136,212,509
	1921	222	20,990	27,807,490	419,419,120	491,156,185	71,737,095
Primary, total.	1931	76	18,477	22,716,192	335,713,021	408,588,765	72,875,744
	1929	75	30,981	49,239,319	1,199,025,259	1,345,799,941	146,774,682
	1927	69	30,510	44,799,809	807,242,176	942,734,864	135,462,688
	1925	71	32,992	47,947,907	912,063,567	1,067,124,899	155,061,332
	1923	88	35,146	51,510,128	830,089,699	952,734,111	122,644,412
	1921	85	19,014	25,148,682	368,331,888	430,031,904	61,700,016
Smelting and refining, cop- per.	1931	27	8,642	10,708,010	226,519,818	269,383,991	42,864,073
	1929	26	14,544	23,951,955	520,351,441	604,783,862	74,432,421
	1927	26	13,924	20,581,865	527,763,711	609,299,017	81,535,806
	1925	26	15,588	22,641,626	573,190,428	665,176,767	91,985,339
	1923	29	16,777	25,459,160	554,099,924	625,432,965	71,333,041
	1921	28	8,293	11,199,279	205,903,896	234,895,245	28,991,349
Smelting and refining, lead.	1931	16	2,584	3,569,193	78,744,573	90,726,257	11,981,684
	1929	19	4,819	7,577,094	203,913,730	232,115,000	28,201,297
	1927	18	5,398	7,689,680	202,859,134	225,137,872	22,278,738
	1925	17	6,115	9,001,580	254,881,029	283,042,542	28,161,513
	1923	20	6,194	8,767,924	207,314,578	227,735,149	20,420,571
	1921	23	4,500	5,957,961	134,061,121	150,693,779	16,532,658
Smelting and refining, zinc.	1931	33	7,251	8,438,989	30,448,530	48,478,517	18,029,987
	1929	30	11,618	17,710,270	74,760,088	118,901,070	44,140,932
	1927	25	11,188	16,528,264	76,619,331	108,297,975	31,678,644
	1925	28	11,269	16,304,701	83,992,110	118,905,890	34,913,480
	1923	35	11,918	16,895,864	64,134,114	94,183,900	30,049,786
	1921	29	5,778	7,243,760	24,312,208	37,482,676	13,170,467
Smelting and refining, metals not elsewhere classified.	1923	4	257	387,180	4,541,083	5,382,007	841,014
	1921	5	434	747,682	4,054,063	7,060,205	3,005,542
Secondary, total.	1931	161	3,429	4,347,757	65,438,420	76,093,022	10,654,602
	1929	176	5,065	7,208,160	145,015,011	173,841,795	28,826,784
	1927	159	3,577	5,714,911	127,771,970	143,417,673	15,645,703
	1925	167	4,202	6,845,222	158,129,790	177,380,987	19,251,207
	1923	117	2,488	3,585,154	94,138,106	107,706,293	13,668,097
	1921	137	1,985	2,658,808	51,087,232	61,124,281	10,037,049
Gold, silver, and platinum, refining and alloying.	1931	63	803	1,185,570	36,892,897	41,397,662	4,504,765
	1929	69	931	1,633,838	61,570,093	67,959,140	6,389,047
	1927	57	801	1,434,620	58,877,476	62,647,127	3,769,651
	1925	65	1,258	2,165,685	88,867,196	95,243,474	6,376,278
	1923	76	901	1,361,237	65,088,918	71,020,702	6,831,784
	1921	77	785	1,130,572	41,055,751	45,974,220	4,918,475
Smelting and refining, non- ferrous metals other than gold, silver, or platinum, not from the ore.	1931	98	2,626	3,162,187	28,545,523	34,665,890	6,149,837
	1929	106	4,134	5,574,322	83,444,918	105,882,655	22,437,737
	1927	102	2,776	4,280,291	68,894,494	80,770,646	11,876,052
	1925	102	2,944	4,679,537	69,262,594	82,137,523	12,874,929
	1923	41	1,587	2,223,917	29,049,188	35,785,501	6,736,313
	1921	60	1,200	1,528,236	10,031,481	15,150,755	5,118,574
Metals and manufac- tures of metals, total.	1931	6,073	186,683	213,113,161	461,036,039	964,679,775	503,543,736
	1929	7,272	278,695	387,019,144	1,121,403,928	2,077,415,981	956,012,053
	1927	6,533	238,580	332,669,876	848,199,323	1,690,954,709	742,755,386
	1925	6,768	239,422	327,859,227	878,244,697	1,595,044,609	716,799,872
	1923	7,296	260,164	339,983,688	843,409,807	1,676,719,526	733,309,719
	1921	7,631	191,681	229,085,295	466,845,723	916,903,259	450,087,536

For footnotes, see p. 878.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1921
to 1931—Continued

INDUSTRY	Cen- sus year	Num- ber of estab- lish- ments	Wage earn- ers (av- erage for the year)	Wages	Cost of mate- rials, con- tainers, fuel, and pur- chased elec- tric energy	Value of products	Value added by manu- facture ¹
Aluminum manufactures...	1931	138	13,803	\$16,106,331	\$41,605,065	\$76,299,567	\$34,694,502
	1929	150	21,210	29,692,727	94,036,463	153,457,248	59,420,785
	1927	139	14,798	20,891,843	79,898,509	123,557,112	43,718,603
	1925	127	14,353	19,753,349	84,984,923	127,830,756	42,845,833
	1923	119	16,288	19,843,646	66,653,519	106,930,367	40,270,848
	1921	87	9,584	10,835,597	25,952,529	45,822,161	19,869,632
Clocks, watches, time-re- cording devices, and ma- terials and parts, except watchcases. ²	1931	75	16,213	15,685,615	12,880,086	45,563,375	32,683,289
	1929	81	21,450	25,750,088	21,388,018	77,467,111	56,079,093
	1927	80	22,472	27,248,194	16,249,035	71,783,468	55,533,833
	1925	83	22,361	26,274,163	15,474,281	69,966,518	51,522,237
	1923	80	21,326	24,128,662	17,356,872	60,472,713	43,085,841
	1921	77	19,099	20,534,778	12,108,359	43,233,020	31,124,631
Collapsible tubes ³	1931	17	1,737	1,634,463	4,142,410	7,634,190	3,491,780
	1929	17	1,821	1,782,024	5,385,906	8,912,977	3,527,071
	1927	17	1,984	1,918,055	7,163,927	11,350,710	4,249,783
	1925	16	1,948	1,876,526	5,693,610	9,449,029	3,755,419
Electroplating.....	1931	464	4,107	5,641,654	2,802,451	13,084,240	10,281,789
	1929	534	5,928	9,536,800	4,798,607	23,727,916	18,029,249
	1927	419	3,556	5,629,104	3,335,140	13,930,321	10,595,181
	1925	449	3,337	5,253,845	2,541,165	12,440,510	9,899,345
	1923	446	3,374	5,195,183	2,612,673	12,297,333	9,684,660
	1921	392	2,460	3,562,980	1,959,639	8,040,934	6,081,315
Fire extinguishers, chemical.	1931	25	571	616,882	1,796,421	4,452,815	2,656,394
	1929	28	740	958,570	4,187,524	8,566,089	4,373,565
	1927	26	832	1,191,768	4,069,775	8,035,156	4,026,381
	1925	26	842	1,131,127	4,122,137	8,037,174	3,915,037
	1923	26	762	847,429	3,366,159	6,152,682	2,785,923
	1921	31	580	625,958	2,081,052	4,254,261	2,173,209
Gold leaf and foil.....	1931	48	865	630,784	1,015,086	2,217,366	1,202,280
	1929	75	1,177	1,134,044	1,932,667	3,978,024	2,045,357
	1927	77	1,146	1,120,434	1,721,174	3,571,190	1,850,016
	1925	84	1,148	1,112,685	1,838,611	3,745,807	1,967,196
	1923	64	918	933,591	1,896,806	3,561,856	1,665,050
	1921	72	1,104	1,042,028	4,994,718	7,014,496	2,019,778
Jewelers' findings and ma- terials. ⁴	1931	90	1,899	2,343,295	7,120,906	11,975,592	4,854,686
Jewelry ⁴	1931	1,052	16,724	20,230,957	28,684,460	75,122,643	46,438,183
Jewelry (including jewelers' findings and materials). ⁴	1929	1,536	27,922	38,979,810	79,804,617	177,396,932	97,582,315
	1927	1,367	24,116	36,765,805	76,915,375	164,865,057	87,949,682
	1925	1,468	23,837	35,177,020	79,885,823	160,816,370	86,930,547
	1923	1,622	26,354	36,423,704	83,983,485	174,033,912	90,650,427
	1921	1,671	23,482	29,938,313	58,059,348	127,230,777	69,171,429
Lighting equipment ⁵	1931	523	14,790	18,150,368	30,312,448	75,050,429	44,737,981
	1929	614	23,550	33,268,595	57,918,407	144,965,706	87,047,299
	1927	481	21,039	29,260,824	55,608,545	127,892,407	72,193,862
	1925	517	22,334	31,072,058	57,770,818	129,698,389	71,927,871
	1923	535	22,919	29,097,143	52,639,539	118,978,627	66,339,088
	1921	465	15,566	18,523,190	32,801,696	72,054,398	39,252,792
Needles, pins, hooks and eyes, and snap fasteners.	1931	46	5,354	5,666,534	4,842,405	20,342,098	15,499,633
	1929	43	6,242	6,565,732	6,187,822	22,030,960	15,843,128
	1927	45	5,606	6,098,477	5,922,844	20,325,250	14,402,496
	1925	48	5,850	5,855,679	5,925,652	18,173,574	12,247,922
	1923	49	6,834	6,703,079	7,795,975	22,147,468	14,351,493
	1921	68	6,542	5,512,404	6,162,949	18,896,168	12,733,219
Nonferrous-metal alloys; nonferrous-metal prod- ucts, except aluminum, not elsewhere classified. ⁶	1931	1,056	48,913	55,108,824	195,337,534	331,438,974	136,101,447
	1929	1,225	79,183	116,943,996	600,410,913	909,894,050	309,393,130
	1927	1,197	65,923	95,351,041	378,190,134	581,568,767	203,378,633
	1925	1,140	65,135	93,820,242	401,316,012	593,555,540	192,239,628
	1923	1,156	67,289	92,248,986	381,935,366	573,043,584	191,108,218
	1921	1,047	42,287	49,448,884	161,273,348	252,277,546	91,004,198

For footnotes, see p. 878.

SUMMARY FOR GROUP 12.—NONFERROUS METALS AND THEIR PRODUCTS: 1921 TO 1931—Continued

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
Sheet-metal work, not specifically classified. ²	1931	1,762	19,365	\$25,158,017	\$56,341,919	\$116,442,534	\$90,100,015
	1929	2,161	28,593	43,254,611	112,648,112	222,484,625	109,836,513
	1927	1,981	24,527	38,667,090	98,385,897	191,128,636	92,742,739
	1925	2,107	24,996	37,824,995	84,079,620	175,042,925	90,063,299
	1923	2,524	28,852	42,445,032	93,507,014	188,908,028	95,401,014
	1921	3,105	25,172	36,561,785	75,890,102	148,776,164	72,880,062
Silverware and plated ware. ³	1931	163	11,077	12,712,986	11,792,370	45,814,831	34,022,401
	1929	179	15,735	22,577,965	20,885,693	85,882,325	58,996,632
	1927	178	16,719	23,944,081	31,377,409	87,424,200	66,046,701
	1925	183	16,877	23,843,592	33,177,097	86,861,703	53,084,600
	1923	181	17,090	22,970,937	30,672,938	81,105,227	50,432,220
	1921	169	14,822	17,814,839	21,373,548	58,354,945	36,981,307
Stamped ware, enameled ware, and metal stampings; enameling, japanning and lacquering.	1931	566	28,378	30,661,855	53,618,345	122,696,407	69,078,082
	1929	582	40,000	50,091,700	87,639,495	204,300,134	116,600,630
	1927	476	30,853	38,172,046	68,890,289	150,636,053	82,055,781
	1925	465	31,254	38,276,937	79,736,061	160,991,786	81,255,125
	1923	412	36,552	44,348,364	86,340,191	176,371,354	90,031,193
	1921	388	24,807	27,679,975	49,292,541	103,105,630	53,812,980
Tin and other foils, not including gold foil. ⁴	1931	8	1,218	997,847	7,382,938	12,225,641	4,842,703
	1929	7	1,710	1,856,371	13,548,399	20,954,849	7,406,450
	1927	10	1,658	2,083,578	15,350,016	20,951,679	5,601,063
	1925	10	1,670	2,124,422	15,648,376	20,611,277	4,962,901
Watchcases.....	1931	31	1,669	1,766,749	1,361,195	4,219,133	2,867,093
	1929	40	3,404	4,626,111	4,631,225	13,491,045	8,859,820
	1927	40	3,360	4,326,303	5,310,674	13,724,703	8,414,020
	1925	45	3,480	4,462,587	6,049,905	14,793,211	8,743,306
	1923	57	4,325	5,414,232	7,498,768	17,817,046	10,318,278
	1921	37	3,698	4,217,210	5,625,146	13,805,957	8,180,811

¹ Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

² Formerly 3 separate classifications, "Clocks, Clock Movements, Time-recording Devices, and Time Stamps," "Watch and Clock Materials and Parts, Except Watchcases," and "Watches and Watch Movements."

³ At censuses prior to that for 1929 the manufacture of collapsible tubes and the manufacture of tin and other foils, not including gold foil, were covered by the single industry classification "Tin and Other Foils, Not Including Gold and Silver; Collapsible Tubes." The figures for 1927 and 1925 have been adjusted for comparison with those for later years, but no adjustments can be made for earlier years.

⁴ The manufacture of jewelers' findings and materials was treated as a part of the jewelry industry at the censuses for 1929 and prior years.

⁵ Formerly "Gas and Electric Fixtures; Lamps, Lanterns, and Reflectors."

⁶ Prior to 1929, 3 separate classifications, "Babbitt Metal, White Metal, Type Metal, and Solder," "Brass, Bronze, and Other Nonferrous Alloys, and Manufactures of These Alloys and of Copper, Not Specifically Classified," and "Lead; Bar, Pipe, and Sheet."

⁷ Formerly "Copper, Tin, and Sheet-iron Work, Including Galvanized Iron Work, Not Elsewhere Classified."

⁸ Formerly 2 separate classifications, "Silversmithing and Silverware" and "Plated Ware."

⁹ Revised; revision carried into total for subgroup but not into aggregate for group.

ALUMINUM MANUFACTURES

[A preliminary report for this industry was issued under date of Sept. 21, 1932]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of aluminum plates and sheets; motor-vehicle and other commercial castings; kitchen and other household ware (except electrical appliances); and other aluminum products. This report does not cover the entire production of aluminum articles, since many establishments engaged in the manufacture of products in which aluminum parts are incorporated do their own spinning, casting, or stamping of this metal. Aluminum is also an important material in some products specifically classified in other industries, such as collapsible tubes, foil, electrical household appliances, and lighting equipment. The Aluminum Manufactures industry does not include the primary production of the metal (the reduction of bauxite) nor the recovery of aluminum from scrap, the former being treated as a part of the "Chemicals Not Elsewhere Classified" industry and the latter being assigned to the "Smelting and Refining, Nonferrous Metals Other Than Gold, Silver, and Platinum, Not From the Ore" industry. The value of aluminum ingots made from scrap is, however, included in the item for "Ingots produced for sale" in table 3, p. 880.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1914 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and 1914 but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	138	13,803	\$16,109,331	\$41,605,065	\$76,299,567	\$34,694,502
1929.....	150	21,210	29,692,727	94,036,463	153,457,248	59,420,785
1927.....	139	14,708	20,891,843	79,838,509	123,557,112	43,718,603
1925.....	127	14,353	19,753,349	84,984,923	127,830,756	42,845,833
1923.....	119	16,288	19,843,546	66,659,519	106,930,367	40,270,848
1921.....	87	9,584	10,835,597	25,952,529	45,822,161	19,869,632
1919.....	83	11,402	13,327,306	49,271,861	75,277,948	26,006,087
1914.....	37	4,614	2,611,251	14,421,319	19,597,465	5,176,146
Percent of increase or decrease (—):						
1929-31.....	-8.0	-34.9	-45.8	-55.8	-50.3	-41.6
1927-29.....	7.9	43.3	42.1	17.8	24.2	35.9
1925-27.....	9.4	3.1	5.8	-6.1	-3.3	2.0
1923-25.....	6.7	-11.9	-0.5	27.5	19.5	6.4
1921-23.....	(3)	69.9	83.1	156.9	133.4	102.7
1919-21.....	(3)	-15.9	-18.7	-47.3	-39.1	-23.6
1921-31.....	(3)	44.0	48.6	60.3	66.5	74.6
1919-29.....	(3)	86.0	122.8	90.9	103.9	128.5
<i>States, 1931</i>						
California.....	11	148	\$196,893	\$212,238	\$651,085	\$438,847
Illinois.....	14	528	735,362	1,089,496	2,466,079	1,376,583
Massachusetts.....	7	55	57,091	137,584	277,824	140,240
Missouri.....	7	111	129,184	290,042	687,895	397,853
Ohio.....	27	1,691	2,465,736	5,394,647	10,513,517	5,118,870
Wisconsin.....	15	3,040	2,897,779	7,458,798	14,062,415	6,603,617
Other States ³	57	7,930	9,624,286	27,022,260	47,640,752	20,618,492

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Colorado, 2 establishments; Connecticut, 6; Indiana, 2; Michigan, 14; Minnesota, 1; Nebraska, 1; New Jersey, 7; New York, 11; Pennsylvania, 7; Tennessee, 2; Texas, 1; Washington, 2; West Virginia, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data reported for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931	13,803	14,002	14,399	14,742	14,936	14,593	14,082	13,837	13,588	12,974	12,752	12,971	12,755
1929	21,210	19,085	19,900	21,013	21,884	22,338	22,027	21,842	21,272	21,061	22,200	21,628	20,275
1925	14,353	13,837	13,990	14,218	14,314	14,277	14,400	14,403	14,054	14,306	14,733	14,813	14,798
1919	11,402	9,749	8,656	9,912	9,991	10,696	11,002	11,984	12,027	11,715	12,444	13,543	14,105
1914	4,614	4,027	4,295	4,579	4,597	4,532	4,590	4,471	4,699	4,782	4,911	5,018	4,567
<i>States, 1931</i>													
California	148	156	158	161	169	157	154	137	148	150	129	134	125
Illinois	528	473	471	499	517	498	494	471	473	418	569	734	719
Massachusetts	55	52	51	60	63	55	54	54	52	57	53	54	51
Missouri	111	67	89	83	89	87	92	121	155	162	137	122	125
Ohio	1,991	1,974	2,153	2,158	2,191	2,042	1,972	1,969	1,825	1,911	1,904	1,957	1,838
Wisconsin	3,040	2,832	3,034	3,192	3,136	3,147	3,117	3,118	3,107	3,056	2,969	2,906	2,804

¹ No comparable figures can be given for earlier years.

TABLE 3.—PRODUCTS, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for other years represent production. See sec. 16, p. 9.]

KIND	1931	1929	1927	1925
1. Aluminum Manufactures industry, all products, total value	\$76,299,567	\$153,457,248	\$123,557,112	\$127,830,756
2. Aluminum products	71,891,137	147,351,351	117,440,843	122,036,577
3. Other products (not normally belonging to the industry), value, and receipts for custom and repair work	4,408,430	6,105,897	6,116,269	5,794,179
4. Aluminum products made as secondary products in other industries	7,623,448	14,643,047	21,352,976	10,254,769
Aluminum manufactures, ¹ all industries: Aggregate value (sum of 2 and 4)	79,514,585	161,994,398	138,793,819	141,291,346
Aluminum ware:				
Kitchen and other household ware (except electrical appliances), stamped, spun, and cast, value	\$17,598,758	\$35,100,001	\$28,988,708	\$32,052,179
Other aluminum ware, value	\$4,680,227			
Motor-vehicle parts:				
Pounds	² 6,037,877	15,333,432	(³)	(³)
Value	² \$2,788,426	\$7,466,752	\$16,272,132	\$9,404,048
Castings (not included above):				
Pounds	39,938,447	82,979,337	(³)	(³)
Value	\$17,070,705	\$38,267,674	\$21,059,409	\$29,336,957
Ingot produced for sale:				
Pounds		120,721,143		
Value		\$20,299,723		
Other aluminum manufactures, ¹ value	\$37,376,469	\$54,860,248	\$72,473,570	\$70,495,162

¹ Does not include aluminum products specifically classified in other industries. See "Description of the industry," p. 879.

² Includes data for pistons for all types of internal-combustion engines, motor-vehicle and other.

³ No data.

⁴ Not shown separately, except for 1929, to avoid disclosing, exactly or approximately, the data reported for individual establishments.

⁵ Includes rolled forms (bars, plates, and sheets).

CLOCKS, WATCHES, TIME-RECORDING DEVICES, AND MATERIALS AND PARTS, EXCEPT WATCHCASES

[A preliminary report for this industry was issued under date of Nov. 16, 1932]

Description of the industry.—This industry classification covers establishments engaged primarily in the manufacture of clocks, watches, and clock and watch movements; time-recording clocks, instruments, and stamps; time switches, time locks, etc.; and clock and watch materials and parts, except watchcases. At former censuses these establishments were distributed among three industries, namely: Clocks, Clock Movements, Time-recording Devices, and Time Stamps; Watches and Watch Movements; Watch and Clock Materials and Parts, Except Watchcases. The figures for 1929 and prior years for these industries have been combined in this report so as to make them comparable with those for 1931. Establishments which install purchased movements in cases of their own make are classified as manufacturers of watches; but those which merely install watch movements (whether imported or of domestic manufacture) in purchased cases do not come within the scope of the census.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. (See sec. 34, p. 4). Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
<i>United States</i>						
1931.....	75	16,213	\$15,635,615	\$12,880,086	\$45,563,375	\$32,683,280
1929.....	81	21,450	25,750,088	21,388,018	77,467,111	56,079,693
1927.....	80	22,472	27,248,194	16,249,635	71,783,468	55,533,833
1925.....	83	22,361	26,274,163	15,474,281	66,996,518	51,622,237
1923.....	80	21,326	24,128,662	17,386,872	60,472,713	43,085,841
1921.....	77	19,099	20,534,778	12,108,389	43,233,020	31,124,631
1919.....	91	24,722	24,873,327	14,119,896	56,766,186	42,646,290
1914.....	88	19,814	11,556,906	7,019,896	26,321,548	19,301,652
1909.....	91	19,288	10,515,907	6,096,321	24,631,988	18,585,667
1904.....	69	18,353	9,721,060	5,443,618	21,163,092	15,719,474
1899.....	79	13,248	6,389,660	4,425,473	14,325,814	9,900,341
Percent of increase or decrease (—):						
1929-31.....	(2)	-24.4	-39.1	-39.8	-41.2	-41.7
1927-29.....	(2)	-4.5	-5.5	31.6	7.9	1.0
1925-27.....	(2)	0.5	3.7	5.0	7.1	7.8
1923-25.....	(2)	4.9	8.9	-11.0	10.8	19.6
1921-23.....	(2)	11.7	17.5	43.6	39.9	38.4
1919-21.....	(2)	-22.7	-17.4	-14.2	-23.8	-27.0
1921-31.....	(2)	-15.1	-23.6	6.4	5.4	5.0
1919-29.....	(2)	-13.2	3.5	51.5	36.5	31.5
1909-19.....	-----	28.2	136.5	131.6	130.0	129.5
1899-1909.....	(2)	45.6	64.6	37.8	72.3	87.7

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
<i>States, 1931</i>						
California.....	4	45	\$58,759	\$73,120	\$214,733	\$141,613
Connecticut.....	10	5,752	5,369,138	3,179,387	11,841,296	8,661,906
Illinois.....	14	6,108	5,402,949	4,340,313	17,195,220	12,854,907
Massachusetts.....	10	1,598	1,730,587	2,243,387	6,380,204	4,130,817
New York.....	19	1,137	1,595,146	1,236,389	4,515,141	3,278,752
Ohio.....	6	468	480,748	717,555	2,006,150	1,288,595
Other States ²	12	1,105	1,048,288	1,089,935	3,410,631	2,320,696

¹ Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.² Percent not computed where base is less than 100.³ Indiana, 1 establishment; Maryland, 1; Michigan, 1; New Jersey, 7; Pennsylvania, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	16,213	17,459	17,245	16,938	17,186	16,314	13,543	16,050	15,577	16,253	16,647	16,309	15,030
1929.....	21,450	21,644	21,511	21,479	21,301	21,189	21,131	21,178	21,360	21,418	21,846	21,891	21,454
1925.....	22,381	21,170	21,936	22,366	22,157	22,082	22,111	21,846	22,479	22,626	22,969	23,226	23,382
1919.....	24,722	23,081	23,469	23,880	24,251	24,120	24,513	24,415	25,360	25,501	25,793	26,133	26,143
1914.....	19,814	20,500	20,630	20,713	20,056	19,996	19,821	18,786	19,423	19,591	19,649	19,434	19,100
<i>States, 1931</i>													
California.....	45	42	44	43	40	40	42	45	56	48	49	43	40
Connecticut.....	5,752	6,563	6,492	6,176	6,027	5,585	5,421	5,322	5,396	5,536	5,743	5,648	5,149
Illinois.....	6,108	7,028	6,697	6,653	6,357	6,276	5,988	6,117	6,140	6,195	6,351	6,071	5,422
Massachusetts.....	1,598	1,178	1,351	1,324	1,824	1,588	1,408	1,893	1,843	1,760	1,819	1,823	1,749
New York.....	1,137	1,063	1,081	1,125	1,165	1,169	1,150	1,180	1,162	1,148	1,127	1,142	1,135
Ohio.....	468	405	426	459	543	554	539	488	448	459	399	465	428

TABLE 3.—PRODUCTS, BY CLASS, NUMBER, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927

CLASS	1931		1929		1927	
	Number	Value	Number	Value	Number	Value
1. "Clocks, Watches, Time-Recording Devices, and Materials and Parts, Except Watchcases" industry, all products, total value.....		\$45,563,375		\$77,467,111		\$71,783,468

See footnotes at end of table.

TABLE 3.—PRODUCTS, BY CLASS, NUMBER, AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927—Continued

CLASS	1931		1929		1927	
	Number	Value	Number	Value	Number	Value
2. Clocks, watches, and materials and parts.....		\$41,769,109		\$73,537,328		(?)
3. Other products (not normally belonging to the industry).....		1,490,328		13,126,269		(?)
4. Receipts for contract and custom and repair work.....		2,303,938		1803,514		(?)
5. Clocks, watches, and materials and parts made as secondary products in other industries.....		1,061,247		1,716,576		(?)
Clocks, watches, time-recording devices, and materials and parts, except watchcases, all industries:						
Aggregate value (sum of 2 and 5).....		42,830,356		175,253,904		\$67,042,681
Clocks, complete, for use as timepieces only, total value.....		20,390,885		25,512,288		28,708,350
Electric clocks, total.....	3,797,499	12,004,750	446,654	5,193,243	87,333	1,621,212
Springless.....	3,625,860	11,924,891	(?)	(?)	(?)	(?)
Motor-wound.....	171,639	979,859	(?)	(?)	(?)	(?)
Alarm.....	437,550	1,591,386	(?)	(?)	(?)	(?)
Mantel.....	1,080,844	4,919,672	(?)	(?)	(?)	(?)
Other.....	2,279,105	6,393,692	(?)	(?)	(?)	(?)
Alarm clocks, except electric.....	5,680,537	5,111,068	9,462,293	10,765,117	10,520,317	13,120,007
Clocks, other than alarm and electric, total.....	1,179,227	2,375,067	2,386,284	9,553,928	2,403,797	13,967,131
With domestic movements—						
1-day clocks, except automobile.....	401,241	399,301	1,975,650	7,173,312	2,295,912	13,032,993
8-day clocks, except automobile.....	453,951	1,137,810				
Automobile clocks.....	172,336	579,344	248,032	1,184,730		
With imported movements.....	61,699	258,552	162,602	1,195,886	107,885	934,138
Clock movements:						
For use as timepieces only.....	715,115	951,509	668,636	729,935	622,560	777,451
For use in time-recording instruments and devices.....	149,279	567,068	239,078	1,633,530		
Instruments and devices, complete with clock mechanism:					280,645	4,711,445
Time-recording clocks.....	19,658	1,479,476	47,383	5,159,912		
Other devices.....	38,175	981,765	129,310	1,790,382		
Clock materials and parts, including cases.....		1,854,292		1,071,430		804,181
Watches, watch movements, and parts, except watchcases, total value.....		16,605,361		39,356,427		32,041,254
Nonjeweled watches.....	5,136,869	4,541,430	9,479,979	9,672,554	8,891,633	7,895,794
Jeweled watches, complete.....	859,494	10,287,706	1,523,826	23,772,847		
Jeweled movements, and materials and parts, except watchcases.....		1,776,225		5,911,028		24,145,490

¹ The items covered by this footnote differ from the corresponding ones given in table 3 of the report for 1929 because of the exclusion of data for the Watchcases industry from these items and the inclusion of such data in the corresponding items in the earlier report.

² No comparable data.

³ This item differs from the corresponding one given in table 3 of the report for 1929, partly because of the inclusion of data for watches and parts made as secondary products in the Watchcases industry, such data having been formerly included in item 2, and partly because of the exclusion of data for watchcases made as secondary products in industries other than the Clock and Watch, and the Watchcases industries, such data having been included in this item for 1929.

⁴ Not including watches assembled by establishments which purchase both cases and movements. (See "Description of the industry," p. 881.)

COLLAPSIBLE TUBES

[A preliminary report for this industry was issued under date of Aug. 19, 1932]

Description of the industry.—This industry embraces establishments whose principal products are collapsible tubes, made chiefly of tin, lead, or aluminum, for use as containers for toilet preparations, adhesives, etc.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1931, 1929, 1927, AND 1925, AND FOR STATES, 1931

[Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States"—in particular, West Virginia—are, however, more important in the industry than Pennsylvania]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	17	1,737	\$1,634,463	\$4,142,410	\$7,634,190	\$3,491,780
1929.....	17	1,821	1,782,024	5,385,906	8,912,977	3,527,071
1927.....	17	1,984	1,918,055	7,103,927	11,350,710	4,240,783
1925.....	16	1,948	1,870,526	5,693,610	9,449,029	3,755,419
Percent of increase or decrease (—):						
1929-31.....		-4.6	-8.3	-23.1	-14.3	-1.0
1927-29.....		-8.2	-7.1	-24.2	-21.5	-16.9
1925-27.....	(³)	1.8	2.2	24.8	20.1	13.1
<i>States, 1931</i>						
New Jersey.....	6	537	\$464,366	\$1,279,493	\$2,477,514	\$1,198,021
Pennsylvania.....	3	265	280,897	749,137	1,173,008	423,871
Other States ⁴	8	935	889,200	2,113,780	3,983,668	1,860,888

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Percent not computed where base is less than 100.

⁴ Connecticut, 1 establishment; Delaware, 1; Illinois, 2; New York, 2; Rhode Island, 1; West Virginia, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931 AND 1929,¹ AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931-----	1,737	1,712	1,800	1,798	1,764	1,751	1,765	1,724	1,673	1,723	1,778	1,665	1,688
1929-----	1,821	1,773	1,841	1,969	1,965	1,932	1,883	1,838	1,824	1,790	1,709	1,600	1,674
<i>States, 1931</i>													
New Jersey-----	537	535	533	521	515	532	525	512	509	558	577	569	557
Pennsylvania-----	265	265	274	285	275	269	273	273	265	236	259	256	262

¹ No comparable data for prior years.

TABLE 3.—COLLAPSIBLE TUBES—PRODUCTION, BY QUANTITY AND VALUE, BY STATES: 1931, 1929, AND 1927

[The figures for 1929 refer to manufacturers' sales (shipments or deliveries); those for other years represent production. Statistics are presented for only those States for which figures can be given without disclosing approximations of data for individual establishments. Certain of the "Other States"—in particular, West Virginia—are, however, more important in the industry than Pennsylvania. The differences between the values here given and the "Value of products" items in table 1 are due to the inclusion in this table of data for collapsible tubes made as secondary products in other industries and the exclusion of the values of commodities made as secondary products by establishments in this industry]

	1931		1929		1927	
	Quantity (gross)	Value	Quantity (gross)	Value	Quantity (gross)	Value
United States-----	3,729,671	\$7,767,842	3,447,938	\$8,564,450	2,999,183	\$9,235,320
New Jersey-----	1,413,361	3,013,651	1,556,454	3,980,357	1,273,191	4,114,174
Pennsylvania-----	531,004	1,038,287	482,177	1,266,225	563,832	1,610,588
Other States-----	1,785,306	3,715,904	1,409,307	3,317,868	1,162,160	3,510,558

ELECTROPLATING

Description of the industry.—The establishments classified in this industry are engaged primarily in the plating, by electrolysis, of various metal articles, such as automobile accessories, lighting fixtures, musical instruments, and jewelry, with nickel, silver, copper, chromium, zinc, and gold. The "value of products" represents, to a large extent, receipts for electroplating done on articles owned by others. Many establishments which manufacture plated jewelry or other plated goods do their own electroplating and do not report its value separately, and therefore the report for this industry does not cover all electroplating work done.

SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ¹
<i>United States</i>						
1931.....	464	4, 107	\$5, 641, 654	\$2, 802, 451	\$13, 084, 240	\$10, 281, 789
1929.....	534	5, 628	9, 536, 800	4, 798, 667	23, 727, 916	18, 929, 249
1927.....	419	3, 556	5, 629, 104	3, 335, 140	13, 930, 321	10, 595, 181
1925.....	449	3, 337	5, 253, 845	2, 541, 165	12, 440, 510	9, 899, 345
1923.....	446	3, 374	5, 195, 183	2, 612, 673	12, 297, 333	9, 684, 660
1921.....	392	2, 460	3, 562, 980	1, 959, 639	8, 040, 954	6, 081, 315
1919.....	515	3, 024	3, 793, 605	2, 639, 248	10, 389, 617	7, 750, 369
1914.....	479	2, 594	1, 712, 922	1, 335, 662	4, 773, 309	3, 437, 647
1909.....	461	2, 717	1, 652, 315	1, 205, 185	4, 509, 559	3, 304, 374
1904.....	312	1, 943	1, 092, 835	747, 331	2, 965, 014	2, 217, 683
1899.....	302	2, 086	949, 002	783, 854	2, 719, 961	1, 936, 107
Percent of increase or decrease (—):						
1929-31.....	-13.1	-30.7	-40.8	-41.6	-44.9	-45.7
1927-29.....	27.4	66.7	69.4	43.9	70.3	78.7
1925-27.....	-6.7	6.6	7.1	31.2	12.0	7.0
1923-25.....	7	-1.1	1.1	-2.7	1.2	2.2
1921-23.....	13.8	37.2	45.8	33.3	52.9	59.3
1919-21.....	-23.9	-18.7	-6.1	-25.8	-22.6	-21.5
1921-31.....	18.4	67.0	58.3	43.0	62.7	69.1
1919-29.....	3.7	96.0	151.4	81.8	128.4	144.2
1909-19.....	11.7	11.3	129.6	119.0	130.4	134.5
1899-1909.....	52.6	30.2	74.1	53.8	65.8	70.7
<i>States, 1931</i>						
California.....	44	280	\$467, 371	\$175, 791	\$1, 036, 797	\$861, 006
Connecticut.....	9	130	122, 351	54, 953	371, 976	317, 023
District of Columbia.....	3	11	15, 451	8, 194	44, 148	35, 954
Illinois.....	76	786	1, 102, 959	809, 601	2, 924, 022	2, 114, 421
Indiana.....	16	153	197, 728	67, 860	404, 700	336, 840
Maryland.....	7	41	53, 903	11, 949	113, 464	101, 515
Massachusetts.....	30	251	322, 991	138, 273	693, 796	555, 623
Michigan.....	37	526	624, 703	363, 243	1, 276, 399	1, 013, 156
Minnesota.....	10	58	76, 549	43, 405	189, 326	145, 921
Missouri.....	15	93	145, 128	61, 696	323, 974	268, 278

See footnotes at end of table.

SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931—Con.

[See note at head of table]

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and pur- chased elec- tric energy	Value of products ¹	Value added by manu- facture ²
<i>States, 1931—Continued</i>						
New Jersey.....	16	126	\$192,657	\$111,329	\$400,688	\$289,359
New York.....	84	715	1,076,644	418,959	2,389,029	1,970,070
Ohio.....	39	407	543,800	208,449	1,153,073	944,624
Pennsylvania.....	28	195	282,463	156,452	670,226	513,774
Rhode Island.....	14	105	122,174	63,497	284,889	221,392
Texas.....	5	20	20,909	14,192	56,475	42,283
Washington.....	5	22	36,260	10,522	71,761	61,239
Wisconsin.....	11	116	149,149	48,885	351,748	302,863
Other States ³	15	72	88,464	35,201	221,749	186,548

¹ Includes values of miscellaneous products not normally belonging to this industry as follows: For 1931, \$177,732; 1929, \$214,068; 1927, \$132,158; 1925, \$142,376. Does not include receipts for electroplating reported by establishments engaged primarily in other industries, as follows: For 1931, \$264,332; 1929, \$691,071; 1927, \$101,972; 1925, \$506,269. No corresponding figures can be given for earlier years.

² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Colorado, 2 establishments; Delaware, 1; Florida, 1; Iowa, 2; Kansas, 1; Kentucky, 3; Louisiana, 1; Nebraska, 1; Oregon, 2; Tennessee, 1.

FIRE EXTINGUISHERS, CHEMICAL

Description of the industry.—The establishments assigned to this industry are those whose primary products are portable fire extinguishers, hose reels, and other apparatus (except motor-propelled apparatus) and appliances for extinguishing fire by the use of chemicals; chemical preparations for use with such apparatus and appliances; hand grenades for extinguishing fire; etc.

SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR OHIO, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 34, p. 4. Ohio is the only State for which figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. One of the "Other States," namely, New Jersey, is, however, more important in the industry than Ohio]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	25	571	\$616,882	\$1,796,421	\$4,452,815	\$2,656,394
1929.....	28	740	958,570	4,187,524	8,566,089	4,378,565
1927.....	26	832	1,191,708	4,009,775	8,036,156	4,026,381
1925.....	26	842	1,131,127	4,122,137	8,037,174	3,915,037
1923.....	26	762	847,420	3,366,159	6,152,082	2,785,923
1921.....	31	580	625,958	2,081,052	4,254,261	2,173,209
1919.....	32	777	751,119	2,693,416	5,563,180	2,869,764
1914.....	27	256	200,096	573,975	1,297,723	723,748
1909.....	31	195	126,728	304,821	754,165	449,344
1904.....	35	178	107,540	229,063	581,970	352,967
1899.....	17	64	32,828	70,874	217,833	146,959
Percent of increase or decrease (—):						
1929-31.....	(³)	-22.8	-48.0	-57.1	-48.0	-39.3
1927-29.....	(³)	-11.1	-19.6	-4.4	6.6	8.8
1925-27.....	-----	-1.2	5.4	-2.7	-----	-----
1923-25.....	-----	10.5	33.5	22.5	(³) 30.6	2.8
1921-23.....	(³)	31.4	35.4	61.8	44.6	40.5
1919-21.....	(³)	-25.4	-16.7	-22.7	-23.5	-24.3
1921-31.....	(³)	-1.6	-1.4	-13.7	4.7	22.2
1919-29.....	(³)	-4.8	27.6	55.5	54.0	52.6
1909-19.....	(³)	298.5	492.7	783.6	637.7	538.7
1899-1909.....	(³)	204.7	286.0	330.1	246.2	205.8
<i>States, 1931</i>						
Ohio.....	4	95	\$105,064	\$308,289	\$540,040	\$240,751
Other States ⁴	21	476	511,818	1,488,132	3,903,775	2,415,643

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Includes values of miscellaneous products not normally belonging to this industry, as follows: For 1931, \$245,964; 1929, \$1,118,546; 1927, \$1,160,029; 1925, \$692,810. Does not include following values of chemical fire-extinguishing apparatus and appliances made as secondary products by establishments classified in other industries: For 1931, \$261,306; 1929, \$96,576; 1927, \$620,299. No corresponding figures can be given for earlier years.

³ Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

⁴ Percent not computed where base is less than 100.

⁵ Less than one-tenth of 1 percent.

⁶ California, 1 establishment; Delaware, 1; Illinois, 2; Indiana, 1; Massachusetts, 3; Michigan, 2; Missouri, 2; New Hampshire, 1; New Jersey, 2; New York, 4; Texas, 1; Washington, 1.

GOLD LEAF AND FOIL

Description of the industry.—This industry embraces establishments engaged primarily in beating gold into thin sheets. Small quantities of silver leaf and foil were reported as minor products at censuses prior to 1929.

SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	48	865	\$630,784	\$1,015,086	\$2,217,366	\$1,202,280
1929.....	75	1,177	1,134,044	1,932,667	\$3,978,024	2,045,357
1927.....	77	1,146	1,120,434	1,721,174	\$3,571,190	1,850,016
1925.....	84	1,148	1,112,685	1,838,611	\$3,745,807	1,907,196
1923.....	64	918	933,591	1,890,806	\$3,561,856	1,665,050
1921.....	72	1,104	1,042,028	4,994,718	7,014,496	2,019,778
1919.....	87	950	983,600	2,655,335	4,491,568	1,806,233
1914.....	79	1,135	498,273	1,452,429	2,432,145	979,716
1909.....	88	1,383	636,967	1,617,874	2,630,500	1,112,628
1904.....	83	1,402	662,813	1,476,111	2,695,298	1,219,187
1899.....	93	1,163	498,692	1,604,013	2,666,224	1,062,211
Percent of increase or decrease (—):						
1929-31.....	(³)	-26.5	-44.4	-47.5	-44.3	-41.2
1927-29.....	(³)	2.7	1.2	12.3	11.4	10.6
1925-27.....	(³)	-0.2	0.7	-6.4	-4.7	-3.0
1923-25.....	(³)	25.1	19.2	-3.1	5.2	14.5
1921-23.....	(³)	-16.8	-10.4	-62.0	-49.2	-17.6
1919-21.....	(³)	16.2	5.9	88.1	57.2	11.8
1921-31.....	(³)	-21.6	-39.5	-79.7	-68.4	-40.5
1919-29.....	(³)	23.9	15.3	-27.2	-10.8	13.2
1909-19.....	(³)	-31.3	54.4	74.9	69.6	62.3
1899-1909.....	(³)	18.9	27.7	-5.4	-1.3	4.7
<i>States, 1931</i>						
Illinois.....	5	69	\$73,353	\$87,868	\$183,348	\$115,480
Massachusetts.....	12	44	37,656	64,113	147,585	83,472
New Jersey.....	7	93	74,337	168,800	440,394	271,534
New York.....	13	183	134,407	188,995	387,445	198,450
Other States ⁴	11	476	311,031	525,250	1,058,594	533,344

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

³ The values of products here given include data for miscellaneous commodities made as secondary products by establishments classified in the industry. The production of gold leaf and foil, as reported for the last 3 census years, was as follows: 1931, 168,857 packs (of 500 sheets), valued at \$1,963,360; 1929, 320,685 packs, \$3,872,481; 1927, 236,229 packs, \$2,739,602.

⁴ Percent not computed where base is less than 100.

⁵ California, 2 establishments; Connecticut, 1; Maryland, 1; Minnesota, 1; Pennsylvania, 4; Rhode Island, 2.

GOLD, SILVER, AND PLATINUM, REFINING AND ALLOYING

Description of the industry.—The establishments classified in this industry are engaged in refining and alloying gold, silver, and platinum from bullion, sweepings, scrap, and old metal. The recovery of gold and silver in the refining of copper and lead is covered by the "Smelting and Refining, Copper" and "Smelting and Refining, Lead" industries, respectively. A small quantity of platinum is also obtained in the electrolytic refining of copper. The extraction of metals by washing and milling does not come within the scope of the census of manufactures. The products of this industry include dental gold and amalgams and solders.

SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	63	803	\$1,185,570	\$36,892,897	\$41,397,662	\$4,504,766
1929.....	69	931	1,633,838	61,570,063	67,959,140	6,389,047
1927.....	57	801	1,434,620	58,877,476	62,047,127	3,769,651
1925.....	65	1,258	2,165,685	88,867,196	95,243,474	6,370,278
1923.....	76	901	1,361,237	65,083,918	71,920,702	6,831,784
1921.....	77	785	1,130,572	41,055,751	45,974,226	4,918,475
1919.....	87	644	843,608	49,736,978	55,483,215	5,746,237
1914.....	78	456	390,865	25,709,133	28,587,558	2,878,425
1909.....	62	456	345,738	21,983,709	23,611,764	1,628,055
1904.....	41	287	206,263	17,538,370	18,724,095	1,185,716
1899.....	57	219	141,400	10,932,361	11,811,537	879,176
Percent of increase or decrease (-):						
1929-31.....	(3)	-13.7	-27.4	-40.1	-39.1	-29.5
1927-29.....	(3)	16.2	13.9	4.6	8.5	69.5
1925-27.....	(3)	-36.3	-33.8	-33.7	-34.2	-40.9
1923-25.....	(3)	39.6	59.1	36.5	32.4	-6.7
1921-23.....	(3)	14.8	20.4	58.5	56.4	38.9
1919-21.....	(3)	21.9	34.0	-17.5	-17.1	-14.4
1921-31.....	(2)	2.3	4.9	-10.1	-10.0	-8.4
1919-29.....	(2)	44.6	93.7	23.8	22.5	11.2
1909-19.....	(2)	41.2	144.0	126.2	135.0	253.0
1899-1909.....	(2)	108.2	144.5	101.1	99.9	86.2
<i>States, 1931</i>						
Massachusetts.....	4	16	\$21,995	\$1,177,968	\$1,266,936	\$88,968
New Jersey.....	12	438	650,256	14,233,066	15,983,781	1,750,695
New York.....	16	102	143,332	8,328,729	8,862,945	634,216
Pennsylvania.....	3	15	25,710	479,538	558,655	79,117
Rhode Island.....	8	30	44,847	825,000	1,065,909	240,009
Other States.....	20	202	299,430	11,848,596	13,659,456	1,810,860

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.
² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.
³ Percent not computed where base is less than 100.

⁴ California, 5 establishments; Connecticut, 2; Illinois, 3; Indiana, 1; Michigan, 2; Minnesota, 1; Missouri, 1; Nebraska, 1; Ohio, 2; Texas, 1; Washington, 1.

JEWELRY; JEWELERS' FINDINGS AND MATERIALS

[Preliminary reports for these industries were issued under date of Nov. 18, 1932]

Description of the industries.—This report presents statistics for two industries, namely, "Jewelry" and "Jewelers' findings and materials." The first embraces establishments engaged in manufacturing articles, chiefly for personal adornment, made of gold, silver, platinum, gold-filled metal, rolled-gold plate, brass, bronze, copper, or other metals, plain, engraved, or chased, and with or without precious or semiprecious stones; the second covers the manufacture of jewelers' findings and materials. See p. 15, sec. 24, Group 12, "Jewelers' findings," etc., and "Jewelry."

TABLE 1.—SUMMARY FOR THE INDUSTRIES IN COMBINATION, FOR THE UNITED STATES, 1899 TO 1931, AND FOR EACH INDUSTRY, BY STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the Jewelry industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
JEWELRY AND JEWELERS' FINDINGS AND MATERIALS, TOTAL						
<i>United States</i>						
1931-----	1,151	18,623	\$22,574,252	\$35,805,366	\$87,098,235	\$51,292,869
1929-----	1,536	27,922	38,979,810	79,804,617	177,386,932	97,582,315
1927-----	1,367	24,116	36,765,805	76,915,375	164,865,057	87,949,682
1925-----	1,468	23,837	35,177,020	79,885,823	166,816,370	86,930,547
1923-----	1,622	26,354	36,423,704	83,983,485	174,033,912	90,050,427
1921-----	1,671	23,482	29,938,313	58,059,348	127,230,777	69,171,429
1919-----	2,054	30,871	35,863,718	110,450,683	203,939,230	93,488,547
1914-----	1,914	28,289	18,301,565	39,116,136	81,006,289	41,890,153
1909-----	1,537	30,347	18,357,950	36,674,859	80,349,874	43,675,015
1904-----	1,023	22,080	12,592,846	24,177,229	53,225,681	29,048,452
1899-----	851	20,468	10,643,887	22,234,634	46,128,659	23,894,025
Percent of increase or decrease (-):						
1929-31-----	-25.1	-33.3	-42.1	-55.1	-50.9	-47.4
1927-29-----	12.4	15.8	6.0	3.8	7.6	11.0
1925-27-----	-6.9	1.2	4.5	-3.7	-1.2	1.2
1923-25-----	-9.5	-9.6	-3.4	-4.9	-4.1	-3.5
1921-23-----	-2.9	12.2	21.7	44.7	36.8	30.2
1919-21-----	-18.6	-23.9	-16.5	-47.4	-37.6	-26.0
1921-31-----	-31.1	-20.7	-24.0	-38.3	-31.5	-25.8
1919-29-----	-25.2	-9.6	8.7	-27.7	-13.0	4.4
1909-19-----	33.6	1.7	95.4	201.2	153.8	114.1
1899-1909-----	80.6	48.3	72.5	64.9	74.2	82.8
JEWELRY						
United States, 1931-----	1,052	16,724	\$20,230,957	\$28,684,460	\$75,122,643	\$46,438,183

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE INDUSTRIES IN COMBINATION, FOR THE UNITED STATES, 1899 TO 1931, AND FOR EACH INDUSTRY, BY STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ¹
JEWELRY—continued						
<i>States, 1931</i>						
California.....	67	424	\$555,485	\$700,829	\$1,833,330	\$1,132,501
Colorado.....	11	51	68,651	48,614	190,437	141,823
District of Columbia.....	3	13	23,409	23,666	82,520	58,854
Georgia.....	4	29	33,369	22,617	101,019	78,402
Illinois.....	64	687	969,027	1,097,318	3,111,068	2,013,750
Kentucky.....	7	30	40,942	25,333	91,404	66,071
Maryland.....	10	55	69,136	80,642	259,768	179,126
Massachusetts.....	93	3,324	4,032,512	3,738,978	11,680,211	7,941,233
Michigan.....	14	130	183,578	413,577	941,614	523,037
Minnesota.....	18	204	293,968	338,593	1,044,014	705,421
Missouri.....	26	325	443,887	362,962	1,138,032	775,070
Nebraska.....	3	21	28,685	7,307	63,076	55,769
New Jersey.....	79	1,672	2,154,472	2,543,927	7,116,129	4,572,202
New York.....	375	3,098	4,546,896	10,055,175	23,410,112	13,354,937
Ohio.....	31	339	444,497	663,975	1,753,032	1,089,057
Pennsylvania.....	45	327	434,098	563,074	1,490,881	927,807
Rhode Island.....	145	5,430	5,206,980	7,172,823	18,254,748	11,081,925
Texas.....	7	45	47,654	52,210	146,113	93,903
Utah.....	4	21	33,124	17,345	73,337	55,992
Washington.....	9	92	108,460	156,828	269,707	112,879
Wisconsin.....	6	37	49,442	27,114	121,409	84,295
Other States ²	31	370	492,685	671,553	1,950,682	1,379,129
JEWELERS' FINDINGS AND MATERIALS						
United States, 1931.....	99	1,899	2,343,295	7,120,906	11,975,592	4,854,686
<i>States, 1931</i>						
Massachusetts.....	14	600	792,817	2,797,623	4,272,574	1,474,951
New York.....	41	193	305,264	1,170,625	2,165,373	994,748
Rhode Island.....	38	1,028	1,128,682	2,946,080	5,158,266	2,212,186
Other States ³	6	78	116,532	206,578	379,379	172,801

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.³ Arkansas, 1 establishment; Connecticut, 5; Florida, 1; Indiana, 8; Iowa, 2; Louisiana, 2; Maine, 1; Montana, 1; Nevada, 1; New Mexico, 1; North Carolina, 1; North Dakota, 1; Oklahoma, 2; Oregon, 2; South Dakota, 1; and Virginia, 1.⁴ Illinois, 1 establishment; New Jersey, 4; and Pennsylvania, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, IN COMBINATION, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR EACH INDUSTRY, BY STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number employed during year	NUMBER REPORTED FOR--											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
JEWELRY AND JEWELERS' FINDINGS AND MATERIALS, TOTAL													
<i>United States</i>													
1931.....	18, 023	19, 235	19, 268	19, 004	18, 453	18, 022	17, 900	17, 085	18, 023	19, 253	19, 942	19, 002	18, 256
1929.....	27, 922	27, 268	27, 695	27, 895	27, 412	27, 085	26, 878	26, 806	27, 539	29, 247	30, 002	29, 555	27, 685
1925.....	23, 837	24, 078	24, 330	24, 094	23, 259	22, 642	22, 038	21, 675	22, 525	24, 142	25, 816	25, 916	25, 528
1919.....	30, 871	27, 162	28, 241	29, 295	30, 020	30, 856	31, 322	32, 281	32, 462	32, 243	31, 380	32, 383	32, 817
1914.....	28, 280	30, 577	29, 941	29, 314	28, 741	28, 568	27, 709	26, 542	26, 807	28, 075	28, 567	27, 677	27, 150
1909.....	30, 347	30, 156	29, 445	29, 134	28, 115	28, 609	28, 728	28, 129	29, 309	31, 747	33, 259	33, 716	33, 809
JEWELRY													
United States, 1931.....	16, 724	17, 218	17, 221	17, 005	16, 516	16, 191	16, 052	15, 508	16, 195	17, 334	17, 947	17, 175	16, 527
<i>States, 1931</i>													
California.....	424	439	447	439	429	432	421	401	412	423	429	415	405
Colorado.....	51	53	53	52	51	51	52	48	50	51	49	48	51
District of Columbia.....	13	13	13	13	13	13	13	13	13	13	13	13	13
Georgia.....	29	30	30	30	30	30	29	29	29	29	29	29	30
Illinois.....	687	675	711	690	670	669	672	635	630	670	730	739	758
Kentucky.....	30	31	31	31	30	30	30	30	30	30	29	29	30
Maryland.....	55	58	58	54	55	53	54	53	52	54	54	55	58
Massachusetts.....	3, 324	3, 324	3, 318	3, 239	3, 377	3, 331	3, 286	3, 204	3, 311	3, 434	3, 494	3, 372	3, 197
Michigan.....	130	152	148	150	147	144	138	96	116	108	116	117	123
Minnesota.....	204	222	216	212	209	206	194	191	195	197	198	205	208
Missouri.....	325	365	316	311	312	308	300	324	325	328	331	331	348
Nebraska.....	21	22	21	21	21	20	19	20	21	21	21	21	22
New Jersey.....	1, 672	1, 777	1, 737	1, 708	1, 699	1, 661	1, 634	1, 531	1, 574	1, 698	1, 726	1, 694	1, 627
New York.....	3, 098	3, 387	3, 297	3, 284	3, 132	3, 079	2, 941	2, 641	2, 703	3, 033	3, 238	3, 250	3, 190
Ohio.....	339	363	365	364	355	359	329	303	307	310	322	334	357
Pennsylvania.....	327	343	339	330	336	327	328	304	301	309	318	333	345
Rhode Island.....	5, 430	5, 394	5, 548	5, 509	5, 139	4, 961	5, 074	4, 965	5, 565	6, 021	6, 231	5, 589	5, 158
Texas.....	45	44	46	46	53	55	48	32	45	44	47	47	33
Utah.....	21	21	21	21	21	21	21	20	20	21	21	21	21
Washington.....	92	96	94	94	93	92	92	90	89	91	91	92	93
Wisconsin.....	37	41	38	37	36	36	36	35	35	35	35	35	40
JEWELERS' FINDINGS AND MATERIALS													
United States, 1931.....	1, 899	2, 017	2, 047	1, 999	1, 967	1, 831	1, 848	1, 780	1, 828	1, 919	1, 995	1, 827	1, 729
<i>States, 1931</i>													
Massachusetts.....	600	675	657	627	618	603	595	529	575	610	622	564	527
New York.....	193	197	200	195	187	188	187	180	192	194	207	194	193
Rhode Island.....	1, 028	1, 066	1, 109	1, 096	1, 080	965	958	994	988	1, 039	1, 089	992	932

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1927 TO 1931

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for other years represent production. See sec. 16, p. 9]

KIND	1931	1929	1927
1. "Jewelry" and "Jewelers' Findings and Materials" industries, all products, total value.....	\$87,098,235	\$177,386,932	\$164,865,057
2. Jewelry and jewelers' findings and materials.....	80,046,887	163,136,305	154,999,405
3. Other products (not normally belonging to the industries).....	1,362,297	5,178,262	9,865,592
4. Receipts for custom, contract, and repair work.....	5,689,051	9,072,365	
5. Jewelry made as a secondary product in other industries.....	819,113	1,003,799	1,271,177
Jewelry and jewelers' findings and materials, all industries: Aggregate value (sum of 2 and 5).....	80,866,000	164,140,104	156,270,642
Jewelry, total.....	68,175,406	142,433,383	140,944,198
Platinum.....	13,015,950	41,372,454	35,730,369
Gold.....	19,245,142	43,037,733	39,554,691
Gold-filled and rolled-gold-plated.....	3,467,832	10,980,158	11,228,077
Silver.....	5,591,915		
Electroplated on base metals:		10,609,618	6,086,567
Silver-plated.....	2,135,643		
Gold-plated.....	3,667,862	5,842,163	3,305,479
Platinum and other metal plated.....	4,102,939	(1)	(1)
Platinum, gold, and silver jewelry not reported separately.....	1,288,450	(1)	26,787,439
Emblematic and novelty jewelry.....	16,229,733	29,991,257	18,251,576
Jewelers' findings—unassembled parts, except gems, stones, and stock shop products.....	5,891,236	21,706,721	15,328,444
Jewelers' materials, other than findings, total.....	7,209,298		
Platinum stock.....	85,769	(1)	(1)
Stock shop products (sheet, wire, and tubing) other than platinum.....	7,213,529	(1)	(1)

¹ Not called for on schedule.

TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1931

[This table gives statistics for each State (a) for which it is possible to publish separate figures without disclosing, exactly or approximately, the output of individual establishments, and (b) which contributed at least 2 percent of the total value of the specified class of products. In some cases, however, certain of the "Other States" reported larger values of the specified products than some of the States for which separate figures are given]

KIND AND STATE	Value	KIND AND STATE	Value
Jewelry and jewelers' findings and materials, all industries, aggregate.....	\$30,866,000	Jewelry and jewelers' findings and materials—Continued	
Jewelry, total.....	68,175,466	Jewelry—Continued	
Platinum, total.....	13,015,950	Electroplated on base metals—Continued	
California.....	672,948	Silver-plated, total.....	\$2,135,643
Illinois.....	672,077	New York.....	103,578
Michigan.....	225,312	Rhode Island.....	460,698
New Jersey.....	731,147	Other States.....	1,571,367
New York.....	9,058,613	Platinum and other metal-plated, total.....	4,102,939
Ohio.....	691,463	Massachusetts.....	1,023,236
Pennsylvania.....	402,779	New York.....	216,486
Other States.....	561,611	Rhode Island.....	1,714,137
Gold, total.....	19,245,142	Other States.....	1,149,080
California.....	515,329	Platinum, gold, and silver jewelry, not reported separately.....	1,288,450
Illinois.....	781,404	Emblematic and novelty jewelry, total.....	16,229,733
Michigan.....	446,863	Illinois.....	443,913
New Jersey.....	3,347,892	Massachusetts.....	2,893,997
New York.....	7,384,054	New Jersey.....	798,587
Ohio.....	568,605	New York.....	3,983,126
Rhode Island.....	2,232,359	Pennsylvania.....	435,881
Other States.....	3,968,576	Rhode Island.....	6,783,956
Gold-filled and rolled-gold-plate, total.....	3,497,832	Other States.....	890,273
Illinois.....	82,816	Jewelers' findings, total.....	5,391,236
Massachusetts.....	1,603,881	Massachusetts.....	551,638
New Jersey.....	170,407	New Jersey.....	255,840
New York.....	93,062	New York.....	2,304,442
Rhode Island.....	1,304,168	Rhode Island.....	1,824,888
Other States.....	243,498	Other States.....	354,428
Silver, total.....	5,591,915	Jewelers' materials, other than findings, total.....	7,299,298
California.....	114,682	Platinum stock.....	85,760
Illinois.....	154,771	Stock shop products (sheet, wire, and tubing) other than platinum, total.....	7,213,529
Massachusetts.....	710,684	Massachusetts.....	3,587,254
New Jersey.....	258,547	Rhode Island.....	3,483,865
New York.....	252,289	Other States.....	142,420
Rhode Island.....	3,753,785		
Other States.....	347,157		
Electroplated on base metals: Gold-plated, total.....	3,067,862		
Massachusetts.....	853,600		
New York.....	63,983		
Rhode Island.....	1,845,310		
Other States.....	304,969		

LIGHTING EQUIPMENT

[A preliminary report for this industry was issued under date of Nov. 26, 1932]

Description of the industry.—This industry classification embraces establishments engaged primarily in the manufacture of electric-lighting equipment (not including incandescent bulbs) for residential, commercial, and industrial use; motor-vehicle lamps; gas-, kerosene-, and gasoline-lighting equipment; reflectors and shades; and parts. (Establishments which manufacture incandescent electric bulbs as their primary products are classified in the Electrical Machinery, Apparatus, and Supplies industry.)

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ¹
<i>United States</i>						
1931.....	523	14, 790	\$18, 150, 388	\$30, 312, 448	\$75, 050, 420	\$14, 737, 081
1929.....	614	23, 580	33, 208, 595	57, 918, 407	144, 965, 706	87, 047, 200
1927.....	481	21, 030	29, 260, 824	55, 608, 545	127, 802, 407	72, 193, 862
1925.....	517	22, 334	31, 072, 058	57, 770, 818	129, 698, 389	71, 927, 571
1923.....	535	22, 919	29, 067, 143	52, 639, 539	118, 978, 627	66, 339, 088
1921.....	466	15, 866	18, 523, 190	32, 801, 606	72, 054, 398	39, 252, 702
1919.....	512	18, 155	19, 094, 877	38, 687, 571	80, 306, 870	41, 679, 299
1914.....	611	18, 047	10, 677, 034	22, 101, 898	45, 378, 224	23, 276, 326
1909.....	619	18, 861	10, 393, 078	20, 467, 357	45, 057, 372	24, 590, 015
1904.....	405	12, 670	0, 407, 984	11, 077, 758	26, 560, 260	15, 482, 502
1899.....	377	11, 238	5, 188, 063	7, 961, 965	19, 821, 334	11, 850, 369
Percent of increase or decrease (—):						
1929-31.....	-14.8	-37.3	-45.4	-47.7	-48.2	-48.6
1927-29.....	27.7	12.1	13.7	4.2	13.4	20.6
1925-27.....	-7.0	-5.8	-5.8	-3.7	-1.5	.4
1923-25.....	-3.4	-2.6	6.8	9.7	9.0	8.4
1921-23.....	15.1	44.5	57.1	60.5	65.1	69.0
1919-21.....	-9.2	-12.6	-3.0	-15.2	-10.3	-5.8
1921-31.....	12.5	-6.8	-2.0	-7.6	4.2	14.0
1919-29.....	19.9	29.0	74.2	49.7	80.4	108.9
1909-19.....	-17.3	-3.7	83.7	89.0	78.4	69.5
1899-1909.....	64.2	67.8	100.3	157.1	127.3	107.8
<i>States, 1931</i>						
California.....	67	664	\$793, 172	\$1, 247, 445	\$3, 105, 317	\$1, 857, 872
Colorado.....	4	23	25, 768	31, 363	130, 475	99, 112
Connecticut.....	18	1, 128	1, 204, 690	1, 102, 233	3, 168, 298	2, 066, 065
Illinois.....	64	2, 400	3, 021, 027	4, 778, 206	13, 390, 080	8, 611, 874
Massachusetts.....	15	300	367, 331	470, 833	1, 495, 144	1, 024, 311
Michigan.....	10	1, 067	1, 213, 197	2, 253, 231	4, 506, 180	2, 252, 949
Minnesota.....	5	21	28, 164	46, 994	115, 203	68, 209
Missouri.....	12	292	445, 575	482, 242	1, 557, 716	1, 075, 474
New Jersey.....	20	498	599, 495	1, 386, 067	2, 980, 360	1, 594, 293
New York.....	157	3, 737	5, 255, 821	9, 444, 299	22, 043, 185	12, 598, 886

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>States, 1931—Continued</i>						
Ohio.....	34	1,777	\$1,999,966	\$3,152,586	\$7,839,415	\$4,680,829
Pennsylvania.....	39	652	839,789	1,264,869	3,068,388	1,803,519
Washington.....	10	104	150,698	145,816	400,898	255,082
Wisconsin.....	13	233	287,830	307,804	1,077,253	769,449
Other States ³	25	1,876	1,920,845	4,198,460	10,172,517	5,974,057

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.³ Florida, 2 establishments; Indiana, 9; Iowa, 1; Kansas, 1; Kentucky, 2; Maryland, 5; Oklahoma, 1; Oregon, 2; Rhode Island, 1; Texas, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	14,790	14,756	15,647	15,826	15,719	15,276	14,555	14,171	14,261	14,961	14,360	14,308	13,638
1929.....	23,580	23,097	23,693	23,804	24,141	24,101	23,672	23,339	23,999	24,613	24,348	22,696	21,461
1925.....	22,334	21,018	21,561	21,619	21,759	21,446	21,120	21,046	21,841	23,235	24,497	24,895	23,969
1919.....	18,155	16,537	16,429	16,573	16,848	17,088	17,337	18,228	19,081	19,206	19,783	20,215	20,688
1914.....	18,047	18,819	19,063	19,034	18,883	17,930	17,550	16,888	17,096	17,764	18,483	17,977	17,077
1909.....	18,861	17,691	17,804	18,181	18,693	17,923	17,986	17,743	18,379	19,373	20,457	21,000	21,188
<i>States, 1931</i>													
California.....	664	700	700	633	695	685	651	630	634	656	699	680	662
Colorado.....	23	19	19	17	22	21	21	21	22	21	25	40	29
Connecticut.....	1,128	1,234	1,226	1,145	1,136	1,074	1,047	1,051	1,099	1,122	1,159	1,144	1,101
Illinois.....	2,409	2,409	2,416	2,427	2,446	2,294	2,176	2,278	2,437	2,547	2,614	2,568	2,302
Massachusetts.....	309	329	331	317	320	314	303	300	308	304	296	296	289
Michigan.....	1,067	1,263	1,303	1,399	1,388	1,368	1,182	1,096	1,043	1,065	1,051	616	632
Minnesota.....	21	18	18	20	20	18	19	17	17	22	23	28	31
Missouri.....	292	300	333	316	326	287	282	286	279	272	289	277	257
New Jersey.....	498	481	545	557	514	507	461	449	480	486	531	503	466
New York.....	3,737	3,761	3,771	3,871	3,746	3,677	3,608	3,581	3,561	3,923	3,983	3,876	3,689
Ohio.....	1,777	1,583	2,008	2,030	1,975	1,947	1,869	1,902	1,895	1,764	1,522	1,525	1,499
Pennsylvania.....	652	696	713	702	673	675	642	599	590	618	640	650	625
Washington.....	104	96	111	114	113	109	90	93	111	117	101	97	94
Wisconsin.....	233	233	224	235	240	218	200	205	234	264	252	258	229

TABLE 3.—PRODUCTS, BY CLASS AND VALUE, FOR THE UNITED STATES: 1931 AND 1929

[Figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 16, p. 9]

CLASS	1931	1929
1. Lighting Equipment industry, all products, total value.....	\$75,050,429	\$144,965,766
2. Lighting equipment.....	67,869,305	¹ 138,894,751
3. Other products (not normally belonging to the industry) and receipts for custom and repair work.....	7,181,124	¹ 6,070,955
4. Lighting equipment made as secondary products in other industries.....	8,276,558	¹ 16,889,144
Lighting equipment, all industries: Aggregate value (sum of 2 and 4).....	76,144,853	¹ 155,783,895
Electric-lighting equipment, total value ²	65,588,063	¹ 129,325,883
Residential fixtures:		
Ceiling type (except kitchen units).....	8,532,179	16,011,810
Wall or bracket type (except kitchen units).....	3,711,524	7,094,845
Kitchen units.....	503,647	1,539,841
Portable lamps (table and floor).....	13,241,038	19,787,570
Candelabra and candlesticks.....	157,691	739,886
Outdoor fixtures.....	912,905	1,763,093
Other residential fixtures.....	920,965	3,719,735
Nonresidential fixtures:		
Auditorium, church, and theater.....	2,845,518	5,878,952
Store, office, and school.....	4,963,328	8,455,257
Factory.....	1,158,412	1,630,983
Desk and reading lamps.....	436,583	1,077,356
Window and show-case fixtures.....	332,720	1,108,520
Miscellaneous electric-lighting equipment:		
Street and highway fixtures (except traffic signals ³).....	4,195,017	¹ 7,337,243
Photographing, photo-engraving, and blue-printing lamps.....	400,347	¹ 400,738
Motor-vehicle lamps, complete.....	13,002,470	36,384,191
Searchlights, floodlights, and spotlights.....	3,940,952	¹ 15,705,853
Miners' lamps.....	596,088	
Other electric-lighting equipment.....	5,736,679	
Kerosene and gasoline lighting equipment, total.....	2,204,546	5,676,259
Lamps.....	874,106	2,084,257
Lanterns.....	1,390,440	3,592,002
Carbide lamps.....	236,494	751,504
Reflectors and shades, total.....	2,428,176	4,960,813
Metal, all types.....	1,875,869	3,683,071
All-glass and all-porcelain.....	552,307	1,277,742
Incandescent mantles.....	1,135,359	1,535,978
Gas fixtures.....	189,802	3,785,530
Other lighting equipment.....	1,280,745	
Parts.....	3,024,673	4,767,217
Lighting equipment not separately reported by kind.....		4,920,711

¹ Revised.² Not including incandescent electric bulbs. See "Description of the industry," p. 896.³ Traffic signals are products of the Electrical Machinery, Apparatus, and Supplies industry.

TABLE 4.—PRODUCTS, BY CLASS, NUMBER OF ESTABLISHMENTS, AND VALUE, BY STATES: 1931

[This table gives statistics for each State for which it is possible to publish separate figures without disclosing, exactly or approximately, the output of individual establishments. In some cases, however, certain of the "Other States" outrank some of the States for which separate figures are given]

CLASS AND STATE	Number of establishments	Value	CLASS AND STATE	Number of establishments	Value
Lighting equipment, aggregate value.....	1 621	\$76, 144, 858	Lighting equipment—Contd. Electric-lighting equipment—Continued.		
Electric-lighting equipment: Residential electric-lighting fixtures:			Residential electric-lighting fixtures—Continued.		
Ceiling type (except kitchen units), total.....	182	8, 532, 179	Outdoor fixtures, total.....	92	\$912, 905
California.....	38	379, 065	California.....	23	76, 171
Connecticut.....	7	98, 093	Connecticut.....	4	18, 006
Illinois.....	13	432, 440	Illinois.....	9	100, 454
Missouri.....	5	307, 708	Missouri.....	5	44, 125
New Jersey.....	7	591, 414	New York.....	20	196, 837
New York.....	63	4, 368, 867	Ohio.....	6	213, 853
Ohio.....	11	1, 010, 533	Pennsylvania.....	8	168, 644
Pennsylvania.....	10	273, 374	Other States.....	17	94, 815
Washington.....	6	75, 468	Other residential electric-lighting fixtures.....	25	920, 965
Other States.....	22	995, 167	Nonresidential electric-lighting fixtures: Auditorium, church, and theater, total.....	96	2, 845, 518
Wall or bracket type (except kitchen units), total.....	155	3, 711, 524	California.....	16	211, 887
California.....	35	369, 116	Connecticut.....	6	36, 150
Connecticut.....	7	99, 837	Illinois.....	12	1, 039, 940
Illinois.....	12	201, 482	Missouri.....	5	191, 086
Missouri.....	5	213, 699	New York.....	23	811, 154
New Jersey.....	6	328, 152	Ohio.....	5	160, 949
New York.....	48	1, 869, 642	Pennsylvania.....	7	146, 684
Ohio.....	11	271, 282	Wisconsin.....	4	21, 435
Pennsylvania.....	8	175, 767	Other States.....	18	226, 333
Washington.....	6	25, 727	Store, office, and school, total.....	109	4, 963, 328
Wisconsin.....	4	16, 182	California.....	13	273, 017
Other States.....	13	140, 638	Connecticut.....	5	312, 467
Kitchen units, total.....	68	503, 647	Illinois.....	17	753, 178
California.....	16	31, 413	Minnesota.....	4	27, 220
Illinois.....	5	7, 720	New York.....	29	1, 809, 964
New York.....	20	225, 071	Ohio.....	9	741, 216
Ohio.....	5	72, 902	Pennsylvania.....	8	346, 839
Other States.....	22	166, 541	Washington.....	5	51, 325
Portable lamps (table and floor), total.....	207	13, 241, 038	Other States.....	19	648, 102
California.....	18	666, 734	Factory.....	25	1, 158, 412
Connecticut.....	10	616, 497	Desk and reading lamps, total.....	41	436, 583
Illinois.....	34	3, 956, 294	Connecticut.....	4	63, 326
New York.....	82	5, 723, 325	Illinois.....	7	210, 285
Ohio.....	10	269, 894	New Jersey.....	3	21, 994
Pennsylvania.....	17	1, 143, 142	New York.....	7	50, 031
Washington.....	5	29, 373	Other States.....	20	90, 947
Wisconsin.....	5	44, 104	Window and show-case fixtures, total.....	29	332, 720
Other States.....	26	791, 675	Illinois.....	5	78, 289
Candelabra and candlesticks, total.....	36	157, 691	New York.....	8	60, 790
California.....	5	11, 374	Other States.....	16	193, 641
Illinois.....	5	39, 350			
New York.....	11	52, 843			
Other States.....	15	54, 124			

See footnote at end of table.

TABLE 4.—PRODUCTS, BY CLASS, NUMBER OF ESTABLISHMENTS, AND VALUE, BY STATES: 1931—Continued

[See note at head of table]

CLASS AND STATE	Number of establishments	Value	CLASS AND STATE	Number of establishments	Value
Lighting equipment—Contd.			Lighting equipment—Contd.		
Electric-lighting equipment—Continued.			Kerosene and gasoline lighting equipment:		
Miscellaneous electric-lighting equipment:			Lamps.....	13	\$874, 106
Street and highway fixtures (except traffic signals).....	13	\$4, 195, 017	Lanterns.....	9	1, 390, 440
Photographing, photo-engraving, and blueprinting lamps.....	13	400, 347	Carbide lamps.....	6	236, 494
Motor-vehicle lamps (complete), total.....	25	13, 002, 470	Reflectors and shades:		
Illinois.....	5	644, 803	Metal, all types, total.....	32	1, 875, 860
Other States.....	20	12, 357, 667	Illinois.....	9	1, 104, 940
Searchlights, floodlights, and spotlights, total.....	50	3, 940, 952	Other States.....	23	770, 929
California.....	8	250, 286	All-glass and all-porcelain, total.....	12	552, 307
Illinois.....	10	549, 556	New York.....	6	67, 842
New York.....	16	1, 696, 414	Other States.....	6	484, 465
Other States.....	16	1, 544, 696	Incandescent mantles.....	10	1, 135, 356
Miners' lamps.....	10	596, 088	Gas fixtures.....	8	186, 802
Other electric-lighting equipment.....	89	5, 736, 679	Other lighting equipment.....	29	1, 280, 745
			Parts.....	51	3, 024, 673

¹ Includes 98 establishments in other industries which made lighting equipment as secondary products. The difference (814) between the aggregate number and the sum of the several totals is due to the fact that in many cases 2 or more of the specified products are manufactured by the same establishment.

NEEDLES, PINS, HOOKS AND EYES, AND SNAP FASTENERS

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of (1) needles of all kinds, including sewing-machine needles, knitting-machine needles, and darning, canvas, and bag needles; (2) pins—common or toilet pins, safety pins, and metal hairpins; (3) hooks and eyes; and (4) slide and snap fasteners and clasps. Pins made of precious metals are not treated as products of this industry, but are classified as jewelry.

TABLE 1.—SUMMARY FOR THE UNITED STATES: 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States"—in particular, Pennsylvania—are, however, more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ¹
<i>United States</i>						
1931	46	5,354	\$5,666,534	\$4,842,405	\$20,342,038	\$15,499,633
1929	43	6,242	6,565,732	6,187,822	22,030,950	15,543,128
1927	45	5,006	6,098,477	5,922,844	20,325,250	14,402,406
1925	48	5,850	5,855,679	5,925,652	18,173,574	12,247,922
1923	49	6,834	6,703,079	7,795,975	22,147,468	14,351,493
1921	68	6,542	5,542,404	6,162,949	18,896,168	12,733,219
1919	92	9,294	8,809,781	10,227,199	29,304,995	19,077,796
1914	49	5,339	2,506,611	3,241,657	7,890,879	4,649,222
1909	49	4,638	2,064,378	2,328,674	6,694,095	4,365,421
1904	46	3,965	1,595,923	1,583,644	4,750,589	3,166,945
1899	52	2,653	1,067,364	1,227,997	3,237,982	2,009,985
Percent of increase or decrease (—):						
1929-31	(3)	-14.2	-13.7	-21.7	-7.7	-2.2
1927-29	(3)	11.3	7.7	4.5	8.4	10.0
1925-27	(3)	-4.2	4.1	(4)	11.8	17.6
1923-25	(3)	-14.4	-12.6	-24.0	-17.9	-14.7
1921-23	(3)	4.5	20.9	26.5	17.2	12.7
1919-21	(3)	-20.6	-37.1	-39.7	-35.5	-33.3
1921-31	(3)	-18.2	2.2	-21.4	7.7	21.7
1919-29	(3)	-32.8	-25.5	-39.5	-24.8	-17.0
1909-19	(3)	100.4	326.8	339.2	337.8	337.0
1899-1909	(2)	74.8	93.4	89.6	106.7	117.2
<i>States, 1931</i>						
Connecticut	10	2,135	\$2,204,554	\$1,818,575	\$7,335,972	\$5,517,397
Illinois	4	156	174,066	422,936	1,099,532	676,596
New Hampshire	4	335	313,817	55,005	533,630	478,025
New Jersey	6	556	574,531	575,164	1,541,573	966,469
New York	8	335	366,165	465,367	1,459,913	994,546
Other States ²	14	1,837	2,033,461	1,505,358	8,371,418	6,866,060

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.
² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20.

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³ Not computed where base is less than 100.

⁴ Less than one-tenth of 1 percent.

⁵ California, 2 establishments; Massachusetts, 2; Michigan, 1; Missouri, 1; Ohio, 1; Pennsylvania, 4; Rhode Island, 1; Vermont, 1; Wisconsin, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, the data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	5,354	5,168	5,145	5,226	5,227	5,307	5,285	5,367	5,337	5,602	5,610	5,678	5,297
1929.....	6,242	5,872	6,010	6,013	6,056	6,055	6,399	6,302	6,358	6,726	6,790	6,309	6,015
1925.....	5,850	5,675	5,740	5,785	5,777	5,691	5,680	5,748	5,603	5,977	6,042	6,087	6,092
1919.....	9,294	9,008	8,994	8,949	8,824	8,823	8,925	9,314	9,587	9,525	9,692	9,835	10,052
1914.....	5,339	5,497	5,474	5,445	5,421	5,405	5,268	5,318	5,199	5,285	5,279	5,258	5,216
1909.....	4,638	4,370	4,424	4,567	4,668	4,704	4,604	4,496	4,652	4,702	4,759	4,789	4,921
<i>States, 1931</i>													
Connecticut.....	2,135	2,049	2,048	2,092	2,063	2,080	2,117	2,205	2,142	2,207	2,222	2,261	2,123
Illinois.....	156	142	158	164	155	153	147	151	166	177	156	153	148
New Hampshire.....	335	315	320	326	326	324	325	315	337	353	355	361	362
New Jersey.....	556	619	580	578	569	564	545	539	526	534	539	541	540
New York.....	335	304	310	342	353	362	354	345	330	324	341	332	315

TABLE 3.—PRODUCTS, BY CLASS, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1925 TO 1931

[The figures for 1929 refer to sales (shipments or deliveries) by manufacturers; those for other years represent production. See sec. 16, p. 9]

CLASS	1931	1929	1927	1925
1. "Needles, Pins, Hooks and Eyes, and Snap Fasteners" industry, all products, total value.....	\$20,342,038	\$22,030,950	\$20,325,250	\$18,173,574
2. Needles, pins, etc.....	17,599,841	19,073,153	17,372,452	15,666,148
3. Other products (not normally belonging to the industry).....	2,742,197	2,957,797	2,952,798	2,507,426
4. Needles, pins, etc., made as secondary products in other industries.....	961,655	1,352,544	2,152,441	1,358,938
Needles, pins, hooks and eyes, slide and snap fasteners, and clasps, all industries:				
Aggregate value (sum of 2 and 4).....	\$18,561,496	\$20,425,697	\$19,524,893	\$17,025,086
Needles, total value.....	4,839,318	6,488,869	5,503,227	5,607,192
Knitting-machine (latch and spring), value.....	3,426,012	4,828,865	3,977,596	4,096,033
Other needles, including sewing-machine, value.....	1,413,306	1,600,004	1,525,631	1,511,159
Pins:				
Common or toilet pins, total value.....	\$1,358,617	\$1,709,162	\$1,432,900	\$1,477,168
Pounds.....	2,163,374	2,015,152	1,948,508	(¹)
Value.....	\$924,612	\$1,221,101	\$877,456	\$768,358
Packs.....	954,388	1,187,231	1,432,128	1,793,410
Value.....	\$434,005	\$488,061	\$555,444	\$708,800
Hairpins, metal, ² total value.....	\$1,387,371	\$2,335,504	\$1,559,723	\$1,100,215
"Bobby" type:				
Pounds.....	1,194,966	4,799,175	4,287,113	3,423,331
Value.....	\$697,539	\$2,335,504	\$1,559,723	\$1,100,215
Other types:				
Pounds.....	3,199,820			
Value.....	\$689,832			
Safety pins:				
Gross.....	8,550,455	8,008,813	9,252,187	(¹)
Value.....	\$1,600,059	\$2,218,897	\$2,188,365	\$2,478,021
Slide and snap fasteners and clasps, value.....	\$7,735,336	\$5,532,700	\$6,320,184	\$5,126,214
Hooks and eyes:				
Gross.....	336,839	181,656	189,516	278,334
Value.....	\$218,196	\$200,467	\$195,799	\$342,772
Hook-and-eye tape:				
Yards.....	15,569,592	14,276,203		
Value.....	\$1,165,599	\$1,156,055	\$2,324,695	\$893,514
Miscellaneous products, value.....	\$257,000	\$784,043		

¹ Data incomplete.

² Statistics for the production of hairpins other than metal are given in the report for Combs and Hairpins, Not Made From Metal or Rubber.

NONFERROUS-METAL ALLOYS; NONFERROUS-METAL PRODUCTS, EXCEPT ALUMINUM, NOT ELSEWHERE CLASSIFIED

SMELTING AND REFINING, NONFERROUS METALS OTHER THAN GOLD, SILVER, AND PLATINUM, NOT FROM THE ORE

[Preliminary reports for these industries were issued on Dec. 28, 1932, and Aug. 30, 1932, respectively]

The reports for these two industries are combined because of the fact that secondary nonferrous metals and alloys are made in both.

Description of the industries.—The establishments assigned to the "Nonferrous Metal Alloys; Nonferrous Metal Products, Except Aluminum, Not Elsewhere Classified" industry are engaged primarily in the manufacture of brass, bronze, and other nonferrous alloys; the rolling and drawing of these alloys and of copper, lead, and zinc into plates, sheets, rods, tubing, and pipe; and the manufacture of castings, bearings, and other finished products from these metals. The smelting and refining of scrap is an important secondary activity of this industry.

The "Smelting and Refining, Nonferrous Metals Other Than Gold, Silver, and Platinum, Not From the Ore" industry embraces establishments engaged primarily in the recovery of copper, lead, zinc, nickel, aluminum, and alloys thereof from scrap and dross.

TABLE 1.—SUMMARY FOR EACH INDUSTRY, FOR THE UNITED STATES, 1899–1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industries than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
NONFERROUS-METAL ALLOYS; NONFERROUS-METAL PRODUCTS, EXCEPT ALUMINUM, NOT ELSE- WHERE CLASSIFIED						
<i>United States</i>						
1931.....	1,056	48,913	\$55,108,824	\$195,337,534	\$331,438,974	\$136,101,440
1929.....	1,225	79,183	116,943,996	600,410,913	909,804,050	309,393,137
1927.....	1,197	65,923	95,351,041	378,190,134	581,568,767	203,378,633
1925.....	1,140	65,135	93,820,242	401,316,012	593,555,540	192,239,528
1923.....	1,156	67,289	92,248,986	381,935,366	573,043,584	191,108,215
1921.....	1,047	42,287	49,448,884	161,273,348	252,277,546	91,004,198
1919.....	1,252	78,512	98,286,297	367,752,118	559,455,010	191,702,892
1914.....	1,140	42,371	26,436,242	137,625,252	189,779,577	52,154,325
1909.....	1,181	42,731	24,952,067	123,382,313	179,863,408	56,481,095
1904.....	941	34,913	18,661,806	84,890,639	125,784,624	40,893,985
1899.....	803	28,969	14,523,614	76,070,046	106,570,950	30,500,904
Percent of increase or decrease (—):						
1929–31.....	–13.8	–38.2	–52.9	–67.5	–63.6	–56.0
1927–29.....	2.3	20.1	22.6	58.8	56.4	52.1
1925–27.....	5.0	1.2	1.6	–5.8	–2.0	5.8
1923–25.....	–1.4	–3.2	1.7	5.1	3.6	0.6
1921–23.....	10.4	59.1	88.6	136.8	127.1	110.0
1919–21.....	–16.4	–46.1	–49.7	–56.1	–54.9	–52.5
1921–31.....	0.9	15.7	11.4	21.1	31.4	49.6
1919–29.....	–2.2	0.9	19.0	63.3	62.6	61.4
1909–19.....	6.0	83.7	203.9	198.1	211.0	239.4
1899–1909.....	47.1	47.5	71.8	62.2	68.8	85.2

Footnotes at end of table.

TABLE 1.—SUMMARY FOR EACH INDUSTRY, FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
NONFERROUS-METAL ALLOYS; NONFERROUS-METAL PRODUCTS, EXCEPT ALUMINUM, NOT ELSEWHERE CLASSIFIED—continued						
<i>States, 1931</i>						
Alabama.....	3	31	\$33,009	\$55,365	\$114,360	\$58,995
California.....	57	660	946,253	2,231,319	4,010,529	1,770,210
Colorado.....	8	80	99,545	681,619	960,289	278,670
Connecticut.....	54	14,443	14,810,900	43,794,480	80,771,370	36,976,890
Illinois.....	92	3,245	4,193,784	14,147,653	25,564,250	11,416,597
Indiana.....	33	860	807,409	4,007,878	6,847,707	2,839,829
Iowa.....	5	46	51,369	169,006	200,833	31,827
Kentucky.....	5	36	40,873	129,116	189,915	60,799
Maryland.....	14	1,010	1,006,758	8,813,894	13,260,542	4,446,648
Massachusetts.....	75	1,489	1,800,294	4,358,612	8,760,687	4,402,075
Michigan.....	73	5,248	5,818,444	15,397,659	29,066,253	13,668,604
Minnesota.....	14	133	164,579	519,666	1,052,863	533,197
Missouri.....	23	635	707,453	4,175,206	5,828,838	1,653,632
New Jersey.....	61	2,829	3,575,333	24,068,939	31,505,320	7,436,381
New York.....	201	7,555	8,766,754	32,688,911	53,896,759	21,207,848
Ohio.....	103	3,493	4,199,201	8,212,871	16,939,382	8,726,511
Oregon.....	9	54	68,480	124,472	307,339	182,867
Pennsylvania.....	112	3,112	3,569,285	8,716,310	15,729,141	7,012,831
Rhode Island.....	15	649	702,466	4,690,038	6,051,932	1,861,894
Texas.....	13	128	164,867	600,547	1,043,210	382,663
Washington.....	14	126	181,043	352,450	811,921	459,471
Wisconsin.....	35	1,321	1,432,134	4,793,416	8,606,955	3,813,539
Other States ²	37	1,730	1,908,591	12,548,207	19,918,579	7,370,372
SMELTING AND REFINING, NON-FERROUS METALS OTHER THAN GOLD, SILVER, AND PLATINUM, NOT FROM THE ORE						
<i>United States</i>						
1931.....	98	2,625	3,162,187	28,545,523	34,695,360	6,149,837
1929.....	106	4,134	5,574,322	83,444,918	105,882,655	22,437,737
1927.....	102	2,776	4,280,291	68,894,494	80,770,540	11,876,052
1925.....	102	2,944	4,679,637	69,262,594	82,137,523	12,874,929
1923.....	41	1,587	2,223,917	29,049,188	35,785,501	6,736,313
1921.....	60	1,200	1,528,236	10,031,481	15,150,055	5,118,574
1919.....	81	2,167	3,093,140	40,675,880	50,246,088	9,570,208
1914.....	84	2,585	1,884,325	31,250,707	39,902,114	8,651,407
1909.....	89	2,147	1,281,124	23,162,419	28,072,041	4,906,622
1904.....	65	1,712	994,951	13,759,803	17,462,987	3,643,152
1899.....	61	983	532,068	5,899,935	7,784,095	1,884,760
Percent of increase or decrease (—):						
1929-31.....	-7.5	-38.5	-43.3	-65.8	-67.2	-72.6
1927-29.....	3.9	48.9	30.2	21.1	31.1	88.9
1925-27.....	(³)	-5.7	-8.5	-0.5	-1.7	-7.8
1923-25.....	(³)	85.5	110.4	138.4	129.5	91.1
1921-23.....	(³)	32.3	45.5	189.6	136.2	31.6
1919-21.....	(³)	-44.6	-50.6	-75.3	-69.8	-46.5
1921-31.....	(³)	118.8	106.9	184.6	129.0	20.1
1919-29.....	(³)	90.8	80.2	105.1	110.7	134.5
1909-19.....	(³)	0.9	141.4	75.6	79.0	94.9
1899-1909.....	(³)	118.4	140.8	292.6	260.6	160.5
<i>States, 1931</i>						
California.....	6	183	\$246,518	\$2,089,466	\$2,795,159	\$705,693
Illinois.....	22	738	812,565	9,583,617	10,762,340	1,178,723
Massachusetts.....	5	50	55,071	641,801	817,801	176,000
New Jersey.....	8	134	216,766	1,123,165	1,965,679	842,514
New York.....	9	196	210,886	2,370,244	2,660,089	289,845
Ohio.....	9	105	116,992	1,366,529	1,880,101	513,572
Pennsylvania.....	14	501	565,873	5,553,354	6,391,184	837,830
Other States ⁴	25	719	937,516	5,817,347	7,423,007	1,605,560

¹ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.² Arkansas, 1; establishment; Delaware, 2; Georgia, 4; Kansas, 2; Louisiana, 2; Maine, 2; Montana, 1; Nebraska, 3; New Hampshire, 2; Oklahoma, 2; Tennessee, 4; Utah, 2; Vermont, 2; Virginia, 2; West Virginia, 6.³ Percent not computed where base is less than 100.⁴ Colorado, 1; establishment; Connecticut, 1; Delaware, 1; Indiana, 2; Maryland, 2; Michigan, 7; Minnesota, 1; Missouri, 1; Nebraska, 1; New Hampshire, 1; Oklahoma, 1; Texas, 1; Virginia, 1; Washington, 1; West Virginia, 1; Wisconsin, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR EACH INDUSTRY, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number employed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
NONFERROUS-METAL ALLOYS AND PRODUCTS, NOT INCLUDING ALUMINUM PRODUCTS													
United States													
1931.....	48,913	51,447	51,341	51,781	51,794	51,022	49,678	48,915	47,405	46,710	46,121	45,566	45,180
1929.....	79,183	79,288	81,602	83,641	83,726	83,091	81,714	80,195	79,776	78,894	76,908	72,760	68,606
1925.....	65,135	63,523	65,055	66,004	63,542	63,432	63,836	64,053	64,554	65,026	66,804	68,162	68,624
1919.....	78,512	85,212	78,918	73,435	71,750	71,625	70,784	73,229	78,948	81,415	84,362	86,280	86,186
1914 ¹	42,371	41,571	42,444	43,849	44,114	43,852	43,051	42,506	41,761	41,946	41,293	40,742	41,323
States, 1931													
Alabama.....	31	31	31	30	30	29	30	31	35	34	30	30	30
California.....	660	730	717	714	727	718	689	678	611	611	588	577	561
Colorado.....	80	100	107	90	79	84	93	97	80	68	66	62	62
Connecticut.....	14,443	15,195	15,203	15,223	15,398	14,872	14,523	14,599	13,927	13,769	13,727	13,685	13,287
Illinois.....	3,245	3,294	3,323	3,413	3,429	3,483	3,393	3,257	3,156	3,072	3,104	2,997	3,041
Indiana.....	860	821	847	918	968	913	883	891	841	855	819	805	759
Iowa.....	46	60	56	57	56	56	47	44	35	36	37	30	35
Kentucky.....	36	34	37	39	39	38	38	40	34	34	33	34	33
Maryland.....	1,010	1,134	1,055	1,086	1,041	1,024	1,045	1,014	965	954	948	924	928
Massachusetts.....	1,489	1,612	1,567	1,562	1,541	1,490	1,491	1,485	1,489	1,460	1,427	1,397	1,347
Michigan.....	5,248	5,339	5,427	5,495	5,615	5,628	5,469	5,186	5,064	5,032	5,040	4,844	4,826
Minnesota.....	133	131	144	138	139	143	140	138	135	126	124	122	122
Missouri.....	635	683	682	668	655	634	644	621	629	640	606	582	572
New Jersey.....	2,829	3,083	3,059	3,023	2,979	2,822	2,760	2,756	2,759	2,721	2,679	2,637	2,670
New York.....	7,555	7,994	7,985	8,068	7,969	7,920	7,633	7,445	7,272	7,311	7,056	7,007	7,004
Ohio.....	3,493	3,519	3,493	3,603	3,654	3,765	3,628	3,604	3,409	3,296	3,211	3,285	3,453
Oregon.....	54	44	43	44	47	65	69	50	57	53	61	60	57
Pennsylvania.....	3,112	3,410	3,402	3,405	3,316	3,277	3,104	3,044	2,954	2,899	2,891	2,833	2,810
Rhode Island.....	649	733	718	688	685	656	634	652	646	615	589	567	576
Texas.....	128	131	133	128	128	126	130	137	131	129	121	116	122
Washington.....	126	128	133	133	127	138	145	128	127	124	109	113	107
Wisconsin.....	1,321	1,376	1,359	1,388	1,386	1,368	1,356	1,346	1,330	1,258	1,249	1,228	1,203
SMELTING AND REFINING, NONFERROUS METALS OTHER THAN GOLD, SILVER, AND PLATINUM, NOT FROM THE ORE													
United States													
1931.....	2,626	2,817	2,702	2,828	2,701	2,700	2,663	2,630	2,485	2,545	2,543	2,488	2,513
1929.....	4,134	3,945	4,123	4,217	4,232	4,168	4,172	4,191	4,241	4,199	4,129	4,099	3,896
1925.....	2,944	2,839	2,901	2,902	2,889	2,873	2,844	2,913	2,937	3,022	3,065	3,129	2,960
1919.....	2,167	2,284	2,196	2,119	2,073	2,070	2,046	2,141	2,188	2,189	2,226	2,245	2,227
1914.....	2,585	2,828	2,732	2,777	2,832	2,801	2,779	2,713	1,839	2,160	2,525	2,517	2,517
1909.....	2,147	1,975	2,183	2,281	2,033	2,192	2,036	1,960	1,882	2,077	2,314	2,402	2,419
States, 1931													
California.....	183	174	158	172	183	189	173	178	185	192	190	185	219
Illinois.....	738	796	745	818	793	755	756	699	695	724	676	712	683
Massachusetts.....	50	48	46	49	54	64	63	61	58	59	33	52	52
New Jersey.....	134	189	141	140	142	139	135	115	113	132	129	130	129
New York.....	196	222	190	198	188	207	192	202	194	198	208	184	190
Ohio.....	105	86	94	105	117	127	120	109	118	96	107	87	93
Pennsylvania.....	501	591	585	589	474	496	525	472	443	477	467	457	456

¹ No comparable figures can be given for earlier years.

TABLE 3.—INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925

[This table does not include data for the production of copper, lead, zinc, and other nonferrous metals from the ore, nor for the production of secondary metals by establishments engaged in the primary smelting and refining of nonferrous metals. For State figures, see table 6. For statistics showing the total output of secondary metals, see reports of the Bureau of Mines]

[Ton, 2,000 pounds]

KIND	1931	1929	1927	1925
INGOTS AND PIGS				
Made in the "Smelting and Refining, Not From the Ore" industry, value.....	\$32, 979, 016	\$98, 369, 796	\$70, 236, 887	\$64, 668, 247
Made in the "Nonferrous Metal Alloys and Products" industry, value.....	\$25, 043, 482	\$67, 840, 365	\$55, 786, 665	\$64, 563, 638
Made as secondary products in other industries, value.....	\$2, 430, 725	\$3, 237, 506	\$1, 229, 281	\$7, 612, 522
Aggregate production, value.....	\$60, 459, 223	\$169, 447, 667	\$133, 252, 833	\$136, 844, 307
Copper (secondary):				
Tons.....	26, 279	50, 122	16, 836	39, 075
Value.....	\$3, 756, 378	\$16, 512, 500	\$4, 253, 957	\$10, 707, 273
"Smelting and Refining, Not From the Ore" industry, tons.....	25, 820	44, 215	16, 426	24, 061
"Nonferrous Metal Alloys and Products" industry, tons.....	459	5, 907	410	15, 017
Lead (secondary):				
Tons.....	138, 696	153, 042	108, 682	69, 565
Value.....	\$11, 472, 829	\$21, 538, 673	\$14, 773, 503	\$12, 693, 450
"Smelting and Refining, Not From the Ore" industry, tons.....	29, 887	29, 634	84, 420	44, 826
Antimonial, tons.....	57, 182	78, 286		
"Nonferrous Metal Alloys and Products" industry, tons.....	36, 942	27, 425	24, 263	24, 739
Antimonial, tons.....	14, 685	17, 697		
Zinc (secondary):				
Tons.....	19, 144	30, 843	49, 814	39, 808
Value.....	\$1, 441, 187	\$5, 519, 127	\$5, 079, 749	\$6, 518, 406
"Smelting and Refining, Not From the Ore" industry, tons.....	18, 908	38, 184	48, 978	39, 210
"Nonferrous Metal Alloys and Products" industry, tons.....	236	1, 659	836	593
Tin (secondary):				
Tons.....	3, 344	3, 156	(?)	(?)
Value.....	\$1, 238, 095	\$2, 664, 760	(?)	(?)
"Smelting and Refining, Not From the Ore" industry, tons.....	1, 274	1, 361	(?)	(?)
"Nonferrous Metal Alloys and Products" industry, tons.....	2, 070	1, 795	(?)	(?)
Brass and bronze:				
Tons.....	80, 884	145, 490	124, 832	99, 443
Value.....	\$14, 252, 294	\$43, 568, 172	\$29, 503, 535	\$23, 580, 420
"Smelting and Refining, Not From the Ore" industry, tons.....	54, 156	112, 250	94, 770	73, 709
"Nonferrous Metal Alloys and Products" industry, tons.....	26, 728	33, 231	30, 062	25, 734
Antifriction-bearing metal:				
Tons.....	14, 556	54, 369	38, 546	48, 878
Value.....	\$3, 782, 847	\$20, 301, 315	\$17, 467, 002	\$21, 817, 354
"Smelting and Refining, Not From the Ore" industry, tons.....	5, 989	11, 611	15, 222	13, 808
"Nonferrous Metal Alloys and Products" industry, tons.....	8, 567	42, 758	23, 324	35, 570
Solders:				
Tons.....	35, 077	56, 423	45, 850	42, 724
Value.....	\$10, 165, 807	\$28, 595, 090	\$29, 857, 696	\$25, 685, 262
"Smelting and Refining, Not From the Ore" industry, tons.....	10, 859	15, 935	10, 221	4, 412
"Nonferrous Metal Alloys and Products" industry, tons.....	24, 218	40, 488	38, 629	38, 312
Type metal:				
Tons.....	29, 254	42, 290	37, 135	30, 052
Value.....	\$3, 537, 531	\$7, 885, 354	\$7, 340, 897	\$6, 517, 359
"Smelting and Refining, Not From the Ore" industry, tons.....	9, 627	11, 845	10, 845	4, 466
"Nonferrous Metal Alloys and Products" industry, tons.....	19, 627	30, 445	26, 290	25, 586

Footnotes at end of table.

TABLE 3.—INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925—Continued

[See note at head of table]

KIND	1931	1929	1927	1925
INGOTS AND PIGS—continued				
Other nonferrous metals: ¹				
Tons.....	53,487	(²)	(²)	(²)
Value.....	\$10,812,255	\$22,862,676	\$24,076,494	\$29,318,776
"Smelting and Refining, Not From the Ore" industry, tons.....	34,725	(²)	(²)	(²)
"Nonferrous Metal Alloys and Products" industry, tons.....	18,762	(²)	(²)	(²)

¹ The quantities of ingots and pigs made as secondary products in other industries are included in the respective "Nonferrous-metal alloys and products industry, tons" items.

² No comparable data.

³ Value of secondary tin production included in item for "Other nonferrous metals."

⁴ Includes aluminum ingots made in these two industries only.

TABLE 4.—ROLLED FORMS, CASTINGS, AND FINISHED PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925

[This table presents statistics for the total output of the specified classes of commodities made as primary products in the Nonferrous-Metal Alloys and Products industry and as secondary products in other industries. The values of this secondary production in other industries were as follows: 1931, \$14,212,213; 1929, \$29,607,263; 1927, \$30,171,255; 1925, \$23,018,342. For State figures, see table 7]

KIND	1931	1929	1927	1925
Plates and sheets, total value.....	\$76,473,096	\$193,945,176	\$131,549,729	\$124,473,260
Brass and bronze, total tons.....	125,976	255,255	(²)	(²)
For sale:				
Tons.....	106,506	215,575		
Value.....	\$31,572,766	\$91,024,037		
Transferred to other plants of same company:			164,787	189,480
Tons.....	6,349	18,646	\$60,767,990	\$71,024,795
Assigned value.....	\$1,722,125	\$7,621,019		
Produced and consumed in same works, tons.....	13,121	21,034	(³)	(³)
Copper, total tons.....	73,855	129,223	(²)	(²)
For sale and interplant transfer:				
Tons.....	72,003	127,789	92,603	81,158
Value.....	\$23,250,967	\$59,539,928	\$39,232,472	\$35,231,493
Produced and consumed in same works, tons.....	1,852	1,434	(³)	(³)
Lead:				
For sale and interplant transfer:				
Tons.....	16,588	35,802	26,296	25,592
Value.....	\$2,227,488	\$6,490,493	\$4,807,378	\$5,021,165
Nickel alloys, total tons.....	14,682	27,648	(²)	(²)
For sale and interplant transfer:				
Tons.....	13,594	27,162	18,517	
Value.....	\$8,201,927	\$18,337,961	\$12,583,270	
Produced and consumed in same works, tons.....	1,088	486	(³)	
Zinc:				(²)
For sale and interplant transfer:				\$12,535,807
Tons.....	56,562	54,135		
Value.....	\$8,099,396	\$9,543,739	(²)	
Other metals:				
For sale and interplant transfer:			\$14,158,613	
Tons.....	2,527	2,419		
Value.....	\$1,398,427	\$1,457,999		
Rods, total value.....	\$14,480,083	\$135,852,141	\$65,608,990	\$68,988,472
Brass and bronze, total tons.....	143,053	170,228	(²)	(²)
For sale and interplant transfer:				
Tons.....	100,543	125,243	91,680	80,409
Value.....	\$22,576,193	\$45,869,031	\$28,240,630	\$26,522,416
Produced and consumed in same works, tons.....	42,510	44,985	(³)	(³)

Footnotes at end of table.

TABLE 4.—ROLLED FORMS, CASTINGS, AND FINISHED PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925—Continued

[See note at head of table]

KIND	1931	1929	1927	1925
Rods—Continued.				
Copper, total tons.....	201,084	569,540	(?)	(?)
For sale:				
Tons.....	78,696			
Value.....	\$15,985,515			
Transferred to other plants of same company:		227,308	110,055	113,474
Tons.....	11,658	\$81,057,185	\$32,475,636	\$36,485,503
Assigned value.....	\$2,567,004			
Produced and consumed in same works, tons.....	110,730	342,232	(?)	(?)
Nickel alloys, total tons.....	3,911	8,064	(?)	(?)
For sale and interplant transfer:				
Tons.....	2,814	7,232	(?)	
Value.....	\$2,284,715	\$5,875,561	\$3,984,646	
Produced and consumed in same works, tons.....	1,097	832	(?)	(?)
Other nonferrous metals and alloys:				\$5,990,553
For sale:				
Tons.....	1,323	3,628	(?)	
Value.....	\$1,066,656	\$3,050,364	\$908,078	
Tubing (seamless) and pipe, total value.....	\$34,576,210	\$73,888,613	\$54,076,301	\$52,217,893
Brass and bronze, total tons.....	49,312	71,599	(?)	(?)
For sale and interplant transfer:				
Tons.....	48,952	71,286	62,294	51,286
Value.....	\$16,772,719	\$36,229,721	\$25,906,074	\$24,746,835
Produced and consumed in same works, tons.....	360	313	(?)	(?)
Copper:				
For sale:				
Tons.....	32,078			
Value.....	\$12,005,473			
Transferred to other plants of same company:		49,062	36,164	28,977
Tons.....	174	\$25,774,350	\$17,852,019	\$14,909,482
Assigned value.....	\$48,073			
Lead:				
For sale and interplant transfer:				
Tons.....	22,194	37,026	43,835	52,888
Value.....	\$2,906,308	\$7,000,576	\$8,292,077	\$11,869,902
Nickel alloy:				
For sale and interplant transfer:				
Tons.....	1,226	1,789		
Value.....	\$1,289,301	\$2,541,819		
Other metal:				
For sale and interplant transfer:				
Tons.....	2,829	3,686	(?)	(?)
Value.....	\$1,554,336	\$2,342,147	\$2,022,531	\$701,074
Tubing (other than seamless), including brazed:				
Tons.....	1,241	(?)	(?)	(?)
Value.....	\$572,732	\$4,013,360	\$3,354,420	\$3,767,053
Castings, rough, total value.....	\$40,988,576	\$116,586,925	\$70,683,883	\$75,391,014
Brass and bronze:				
Pounds.....	209,266,147	413,512,944	(?)	(?)
Value.....	\$33,468,353	\$98,903,131	\$66,281,802	\$67,027,234
Copper:				
Pounds.....	3,289,545	9,798,512	4,511,029	4,907,055
Value.....	\$950,518	\$2,690,725	\$1,312,760	\$1,307,329
Heat-corrosion-resistant alloys (not including ferrous alloys):				
Pounds.....	2,928,616			
Value.....	\$1,604,356			
Nickel alloys, other than heat-corrosion-resistant:				
Pounds.....		5,227,046	(?)	
Value.....		\$2,942,165	\$1,772,389	
Other metals:				
Pounds.....	1,139,102			
Value.....	\$532,432			
Other metals:				
Pounds.....	15,703,617	28,006,556	(?)	
Value.....	\$4,342,917	\$11,050,904	\$10,316,937	\$7,056,451

See footnotes at end of table.

TABLE 4.—ROLLED FORMS, CASTINGS, AND FINISHED PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925—Continued

[See note at head of table.]

KIND	1931	1929	1927	1925
FINISHED PRODUCTS ¹				
Extruded shapes, total value.....	\$2, 281, 167	\$6, 665, 268	\$4, 678, 076	\$1, 898, 667
Brass and bronze.....	1, 491, 401	5, 245, 183	2, 610, 761	1, 408, 050
Other metals.....	789, 766	1, 420, 085	2, 067, 315	400, 617
Bearings and bushings (including antifriction linings), total value.....	10, 303, 641	27, 680, 058	18, 722, 667	21, 184, 034
Brass and bronze.....	9, 230, 791	26, 599, 654	18, 513, 238	19, 542, 502
Other metals.....	1, 072, 850	1, 080, 404	200, 420	1, 641, 442
Bells.....	478, 905	809, 245	820, 200	1, 182, 660
Die castings.....	8, 036, 806	22, 076, 623	20, 059, 381	20, 116, 492
Finished castings, total value.....	5, 213, 539	15, 550, 907	17, 536, 111	14, 679, 922
Brass and bronze.....	3, 673, 433	12, 352, 183	16, 320, 846	12, 844, 329
Other metals.....	1, 640, 106	3, 198, 724	1, 215, 265	1, 835, 593
Forgings and hot-pressed parts, total value.....	2, 854, 750	7, 768, 582	4, 331, 537	
Brass and bronze.....	2, 807, 167	7, 651, 635	4, 214, 378	35, 715, 400
Other metals.....	47, 583	116, 947	117, 159	
Other nonferrous products.....	19, 260, 235	42, 020, 428	37, 933, 768	
Nonferrous products specifically classified in other industries (See Table 5).....	67, 024, 744	208, 321, 547	92, 153, 501	115, 054, 797

¹ Does not include value for quantities reported as produced and consumed in same works.

² No comparable data.

³ Not called for on schedule.

⁴ Includes aluminum castings made in Nonferrous-Metal Alloys and Products industry only. For total production of aluminum castings, see Aluminum Manufactures report.

⁵ Quantity not called for on schedule.

TABLE 5.—MISCELLANEOUS NONFERROUS-METAL PRODUCTS, SPECIFICALLY CLASSIFIED IN OTHER INDUSTRIES, BY KIND AND VALUE, FOR THE UNITED STATES: 1931, 1929, 1927, AND 1925

[This table gives the production values, for the Nonferrous-Metal Alloys and Products industry alone, for certain classes of commodities which are made to a considerable extent in that industry but which are classified as primary products of other industries. The total production values of these classes of commodities are shown in the reports for the respective industries in which they are made as primary products.]

KIND	1931	1929	1927	1925
Wire and wire products.....	\$46, 037, 749	\$154, 363, 040	\$43, 092, 865	\$54, 900, 431
Electrical supplies.....	2, 175, 465	8, 318, 829	5, 377, 524	7, 588, 792
Hardware.....	825, 445	2, 749, 310	1, 604, 436	16, 763, 776
Plumbers' goods and valves.....	7, 835, 507	15, 289, 134	22, 150, 037	23, 444, 254
Screw-machine products.....	1, 826, 909	3, 189, 065	2, 955, 823	3, 107, 771
Spun and stamped products.....	7, 375, 441	16, 754, 450	10, 134, 065	4, 613, 229
Architectural and ornamental work.....	948, 168	7, 657, 719	6, 838, 761	4, 636, 544

TABLE 6.—INGOTS AND PIGS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, BY STATES: 1931

[This table gives statistics for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. In some cases, however, certain of the "Other States" reported larger quantities and values of the respective classes of products than some of the States for which separate figures are given]

[Ton, 2,000 pounds]

KIND	Tons	Value	KIND	Tons	Value
Ingots and pigs, aggregate.....	400, 721	\$60, 459, 223	Ingots and pigs—Continued.		
Copper (secondary), total.....	26, 279	3, 756, 378	Antifriction-bearing metal—Continued:		
Pennsylvania.....	10, 178	1, 549, 651	Michigan.....	1, 685	\$561, 119
Other States.....	16, 101	2, 206, 727	Missouri.....	809	324, 770
Lead (secondary), total.....	138, 696	11, 472, 829	New Jersey.....	1, 740	560, 450
Common:			New York.....	1, 735	528, 653
Illinois.....	16, 096	1, 382, 218	Ohio.....	2, 122	171, 630
Massachusetts.....	2, 981	362, 780	Pennsylvania.....	2, 191	523, 489
New Jersey.....	7, 539	573, 140	Other States.....	583	179, 190
New York.....	12, 401	927, 017	Solders, total.....	35, 077	10, 165, 807
Ohio.....	1, 967	120, 867	California.....	2, 911	844, 417
Pennsylvania.....	5, 429	441, 064	Illinois.....	8, 726	2, 785, 847
Wisconsin.....	470	48, 333	Massachusetts.....	704	234, 829
Other States.....	19, 937	1, 692, 646	Michigan.....	2, 731	512, 610
Antimonial:			Missouri.....	588	191, 622
Illinois.....	29, 876	2, 039, 311	New Jersey.....	7, 151	2, 454, 218
New York.....	5, 608	447, 589	New York.....	4, 183	1, 093, 810
Ohio.....	2, 932	215, 268	Pennsylvania.....	5, 239	1, 168, 580
Other States.....	33, 391	3, 222, 596	Other States.....	2, 844	889, 694
Zinc (secondary).....	19, 144	1, 441, 187	Type metal, total.....	29, 264	3, 637, 631
Tin (secondary).....	3, 344	1, 238, 095	Illinois.....	7, 518	866, 668
Brass and bronze, total.....	80, 884	14, 252, 294	Massachusetts.....	4, 084	134, 998
Illinois.....	36, 217	5, 407, 658	New York.....	4, 290	553, 916
New Jersey.....	7, 373	1, 848, 444	Pennsylvania.....	4, 482	542, 837
Ohio.....	2, 085	389, 211	Other States.....	11, 980	1, 439, 082
Pennsylvania.....	10, 407	2, 164, 335	Other metals, ¹ total.....	63, 487	10, 812, 255
Other States.....	24, 802	4, 442, 646	Illinois.....	10, 282	2, 065, 759
Antifriction-bearing metal, total.....	14, 556	3, 782, 847	Michigan.....	1, 549	515, 928
California.....	782	266, 952	New Jersey.....	11, 280	2, 185, 424
Illinois.....	4, 209	676, 694	New York.....	2, 833	970, 383
			Pennsylvania.....	9, 332	943, 627
			Other States.....	18, 205	4, 131, 134

¹ Includes aluminum ingots made in the "Nonferrous-Metal Alloys and Products" industry. For total production of aluminum ingots, see Aluminum Manufactures report.

TABLE 7.—ROLLED FORMS, CASTINGS, AND FINISHED PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, BY STATES: 1931

[This table gives statistics for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. In some cases, however, certain of the "Other States" reported larger quantities and values of the respective classes of products than some of the States for which separate figures are given]

[Ton, 2,000 pounds]

KIND	Quantity	Value	KIND	Quantity	Value
Plates and sheets, total.....	Tons 274, 129	\$76, 473, 096	Rods, total.....	Tons 195, 034	\$44, 480, 083
Brass and bronze, total.....	112, 855	33, 294, 891	Brass and bronze, total.....	100, 543	22, 576, 193
Connecticut.....	56, 355	15, 894, 385	Connecticut.....	34, 560	8, 338, 226
Other States.....	56, 500	17, 400, 506	Michigan.....	10, 845	2, 830, 638
Copper, total.....	72, 003	23, 250, 967	Other States.....	55, 138	11, 407, 829
Connecticut.....	13, 435	4, 369, 670	Copper, total.....	90, 354	18, 652, 619
Other States.....	58, 568	18, 881, 297	New York.....	28, 697	6, 117, 350
Lead.....	16, 588	2, 227, 488	Other States.....	61, 657	12, 436, 169
Zinc.....	56, 562	8, 099, 366	Nickel alloys.....	2, 814	2, 284, 715
Nickel alloys.....	13, 594	8, 201, 927	Other metals.....	1, 323	1, 066, 656
Other metals.....	2, 527	1, 398, 427			

TABLE 7.—ROLLED FORMS, CASTINGS, AND FINISHED PRODUCTS—PRODUCTION, BY KIND, QUANTITY, AND VALUE, BY STATES: 1931—Continued

[See note at head of table]

KIND	Quantity	Value	KIND	Quantity	Value
Tubing (seamless) and pipe, total.....	Tons 107, 453	\$34, 576, 210	Castings, rough—Contd.		
Brass and bronze, total.....	48, 952	10, 772, 719	Other metals—Contd.	Pounds	
Connecticut.....	27, 920	9, 396, 289	Indiana.....	381, 863	\$107, 296
Michigan.....	1, 847	771, 103	Iowa.....	329, 991	76, 087
Other States.....	19, 185	6, 005, 327	Massachusetts.....	1, 012, 988	318, 542
Copper, total.....	32, 252	12, 058, 546	Michigan.....	684, 969	252, 999
Connecticut.....	12, 406	4, 377, 602	Minnesota.....	1, 161, 166	187, 077
Michigan.....	9, 022	3, 589, 369	Missouri.....	379, 636	76, 367
Ohio.....	1, 480	679, 671	New Jersey.....	1, 191, 232	425, 641
Other States.....	9, 344	3, 406, 904	New York.....	1, 596, 469	528, 748
Lead, total.....	22, 194	2, 900, 308	Ohio.....	1, 193, 756	429, 249
New York.....	4, 943	408, 825	Pennsylvania.....	2, 127, 475	503, 131
Other States.....	17, 251	2, 407, 453	Rhode Island.....	25, 186	11, 946
Nickel alloys.....	1, 226	1, 289, 301	Texas.....	427, 513	60, 324
Other metals.....	2, 829	1, 554, 336	Washington.....	129, 447	52, 763
Other tubing, including brazed.....	1, 241	572, 732	Wisconsin.....	604, 761	192, 591
Castings, rough, total.....	Pounds 232, 327, 027	40, 988, 576	Other States.....	994, 139	241, 983
Brass and bronze, total.....	209, 266, 147	33, 468, 353	FINISHED PRODUCTS ¹		
Alabama.....	801, 646	151, 101	Extruded shapes, total value.....		2, 281, 167
California.....	8, 505, 198	1, 509, 721	Brass and bronze.....		1, 491, 401
Connecticut.....	5, 086, 029	864, 018	Other metals.....		789, 766
Georgia.....	445, 478	66, 270	Bearings and bushings (including antifriction linings), total value.....		10, 303, 641
Illinois.....	22, 071, 149	3, 177, 211	Brass and bronze, total value.....		9, 230, 791
Indiana.....	3, 840, 042	712, 082	California.....		561, 202
Iowa.....	794, 609	178, 571	Indiana.....		215, 259
Massachusetts.....	0, 986, 925	1, 350, 512	Michigan.....		2, 963, 882
Michigan.....	9, 493, 760	1, 836, 772	New York.....		53, 848
Minnesota.....	1, 770, 540	336, 095	Ohio.....		2, 822, 619
Missouri.....	13, 099, 016	1, 735, 536	Pennsylvania.....		775, 909
New Jersey.....	7, 437, 998	1, 636, 218	Other States.....		1, 838, 072
New York.....	31, 752, 039	5, 106, 253	Other metals.....		1, 072, 850
Ohio.....	16, 019, 557	3, 046, 732	Bells, value.....		478, 905
Oregon.....	777, 427	128, 936	Die castings, total value.....		8, 036, 806
Pennsylvania.....	44, 046, 526	6, 735, 843	Illinois.....		1, 897, 892
Washington.....	1, 652, 712	339, 603	Michigan.....		595, 260
Wisconsin.....	5, 540, 764	827, 682	New York.....		2, 103, 164
Other States.....	28, 244, 762	3, 639, 197	Pennsylvania.....		868, 480
Copper, total.....	3, 289, 545	950, 518	Wisconsin.....		208, 298
California.....	79, 560	21, 596	Other States.....		2, 363, 712
Illinois.....	827, 865	239, 138	Finished castings, total value.....		5, 213, 539
Massachusetts.....	162, 890	40, 861	Brass and bronze, total value.....		3, 573, 433
New York.....	140, 005	34, 658	Michigan.....		617, 672
Ohio.....	434, 740	103, 222	New York.....		959, 118
Pennsylvania.....	713, 084	141, 719	Ohio.....		290, 055
Other States.....	931, 401	209, 324	Pennsylvania.....		297, 810
Heat-corrosion-resistant alloys, total ¹	2, 928, 616	1, 694, 356	Other States.....		1, 409, 278
Ohio.....	535, 145	290, 930	Other metals, total value.....		1, 640, 106
Other States.....	2, 393, 471	1, 403, 426	New York.....		309, 136
Other nickel alloys, total.....	1, 139, 102	532, 432	Other States.....		1, 330, 970
New York.....	150, 759	52, 784	Forgings and hot-pressed parts, total value.....		2, 854, 750
Other States.....	988, 343	479, 648	Brass and bronze.....		2, 807, 167
Other metals, ² total.....	15, 703, 617	4, 342, 917	Other metals.....		47, 583
California.....	662, 044	224, 351			
Connecticut.....	240, 675	84, 073			
Illinois.....	2, 560, 307	569, 749			

¹ Not including ferrous alloys.

² Includes aluminum castings made in the "Nonferrous-Metal Alloys and Products" industry only.

For total production of aluminum castings, see Aluminum Manufacturers report.

³ Quantity not called for on schedule.

SHEET-METAL WORK, NOT SPECIFICALLY CLASSIFIED

Description of the industry.—The establishments classified in this industry are engaged in the production, *in the shop*, of cornices, gutters, spouts, etc., for the exterior of buildings; and of radiator shields, stove and furnace pipes, ventilators and skylights, tanks and bins, and culverts; and in general coppersmithing and sheet-iron work. The materials used are copper, bronze, tin plate, sheet steel, and galvanized iron. The statistics *do not* include data for the outside work, such as the laying of sheet-metal roofs and the installation of cornices, gutters, spouts, etc., done by some of the establishments in the industry.

Change in industry title.—The title of this industry has been changed from "Copper, tin, and sheet-iron work, including galvanized-iron work, not elsewhere classified" to "Sheet-metal work, not specifically classified." This change was made partly because the fabrication of sheet copper has become of secondary importance in the industry and partly for the purpose of making the title simpler and at the same time more descriptive.

SUMMARY FOR THE UNITED STATES, 1904 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	1,762	19,365	\$25,158,017	\$50,341,919	\$116,442,534	\$60,100,615
1929.....	2,161	23,593	43,254,611	112,648,112	222,484,625	109,836,513
1927.....	1,981	24,527	38,667,690	98,385,897	191,128,635	92,742,739
1925.....	2,107	24,996	37,824,995	84,079,626	175,042,925	90,963,299
1923.....	2,524	28,852	42,445,932	93,507,014	188,908,028	95,401,014
1921.....	3,105	25,172	36,561,785	75,896,102	148,776,164	72,820,062
1919.....	4,796	27,640	33,866,823	80,898,528	160,313,945	79,415,417
1914.....	4,527	28,714	20,517,668	50,174,216	94,890,599	44,716,383
1909.....	3,671	28,448	19,367,740	46,933,262	89,387,570	42,454,308
1904.....	1,989	22,556	13,765,688	27,147,964	56,082,029	28,934,065
Percent of increase or decrease (—):						
1929-31.....	-18.5	-32.3	-41.8	-50.0	-47.7	-45.3
1927-29.....	9.1	16.6	11.9	14.5	16.4	18.4
1925-27.....	-6.0	-1.9	2.2	17.0	9.2	2.0
1923-25.....	-16.5	-13.4	-10.9	-10.1	-7.3	-4.7
1921-23.....	-18.7	14.6	16.1	23.2	27.0	30.9
1919-21.....	-35.3	-8.9	8.0	-6.2	-7.2	-8.2
1921-31.....	-43.3	-23.1	-31.2	-25.8	-21.7	-17.5
1919-29.....	-54.9	3.4	27.7	39.2	38.8	38.3
1909-19.....	30.6	-2.8	74.9	72.4	79.3	87.1

See footnotes at end of table.

SUMMARY FOR THE UNITED STATES, 1904 TO 1931, AND FOR STATES, 1931—Con.

[See note at head of table]

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of mate- rials, fuel, and pur- chased elec- tric energy	Value of products ¹	Value added by manu- facture ²
<i>States, 1931</i>						
Alabama.....	6	180	\$127,950	\$290,541	\$509,503	\$209,962
Arizona.....	3	22	19,153	43,480	79,144	35,664
Arkansas.....	5	46	40,869	240,084	385,706	145,622
California.....	202	1,287	1,827,212	3,480,187	7,521,139	4,040,952
Colorado.....	16	146	186,411	651,107	1,224,847	573,740
Connecticut.....	20	170	236,190	431,243	954,856	523,613
District of Columbia.....	4	37	53,575	73,765	176,181	102,416
Florida.....	9	65	78,056	151,218	340,202	188,984
Georgia.....	16	126	117,401	605,896	1,223,306	617,410
Illinois.....	177	1,910	2,727,950	4,504,164	11,094,158	6,589,994
Indiana.....	44	553	589,703	1,431,726	2,939,877	1,608,151
Iowa.....	33	389	437,600	1,380,601	2,546,879	1,166,278
Kansas.....	14	100	155,348	484,115	982,735	498,620
Kentucky.....	20	214	196,546	1,505,350	2,049,656	544,306
Louisiana.....	15	172	145,613	390,888	686,120	295,232
Maine.....	6	46	71,481	200,957	472,187	271,230
Maryland.....	25	350	400,261	666,137	1,596,490	930,353
Massachusetts.....	86	816	1,235,631	1,841,530	4,739,333	2,897,803
Michigan.....	54	523	686,227	1,244,696	3,191,205	1,946,509
Minnesota.....	49	529	647,118	1,563,701	3,419,480	1,855,779
Mississippi.....	4	18	15,096	21,331	64,714	43,383
Missouri.....	63	576	819,211	1,441,684	3,475,324	2,033,640
Montana.....	5	20	24,304	60,766	123,061	62,295
Nebraska.....	15	98	129,495	365,119	709,506	344,387
New Jersey.....	67	597	981,668	1,514,767	3,814,922	2,300,155
New York.....	259	2,664	4,408,953	6,798,209	16,989,603	10,191,394
North Carolina.....	6	39	27,125	99,769	180,774	81,005
Ohio.....	126	2,734	3,208,161	11,465,430	18,376,221	6,910,791
Oklahoma.....	13	53	56,073	75,061	194,025	118,964
Oregon.....	31	240	281,028	635,991	1,344,367	708,376
Pennsylvania.....	118	1,828	2,151,921	4,039,072	8,663,923	4,624,557
Rhode Island.....	15	135	242,930	264,974	696,627	431,653
South Dakota.....	4	32	42,373	182,140	336,273	154,133
Tennessee.....	15	77	86,358	571,775	789,707	217,932
Texas.....	54	338	389,377	1,136,756	2,141,061	1,004,335
Utah.....	14	66	81,172	250,131	475,363	225,262
Vermont.....	5	35	51,220	154,863	258,568	103,705
Virginia.....	7	91	73,826	299,645	528,328	228,683
Washington.....	65	375	488,096	730,183	1,735,647	1,005,464
West Virginia.....	8	779	790,503	2,009,732	3,821,302	1,311,570
Wisconsin.....	53	822	748,071	2,741,531	5,537,836	2,796,305
Other States ³	11	61	80,662	292,604	552,312	259,708

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.³ Delaware, 2 establishments; Idaho, 1; Nevada, 2; New Hampshire, 1; New Mexico, 1; North Dakota, 2; South Carolina, 2.

SILVERWARE AND PLATED WARE

[A preliminary report for this industry was issued under date of Sept. 14, 1932]

Description of the industry.—This industry classification embraces establishments engaged primarily in the manufacture of knives, forks, spoons, and other flatware, hollow ware, toilet ware, ornaments, ecclesiastical ware, novelties, etc., of solid silver, nickel-silver, or pewter, or of metal plated with silver, gold, or other metal. At former censuses the manufacture of silverware was covered by the industry designation "Silversmithing and Silverware" and that of plated ware by the classification "Plated ware." The figures for former years as given in this report have been combined so as to make them comparable with those for 1931.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	163	11,077	\$12,712,986	\$11,792,370	\$45,814,831	\$34,022,401
1929.....	179	15,735	22,577,065	26,885,093	85,882,325	58,990,632
1927.....	178	16,719	23,944,684	31,377,409	87,424,200	56,040,791
1925.....	183	16,877	23,843,592	33,177,087	86,861,703	53,684,606
1923.....	181	17,090	22,970,937	30,672,998	81,105,227	50,432,229
1921.....	169	14,822	17,814,839	21,373,548	58,354,945	36,981,397
1919.....	167	15,945	18,272,500	30,827,465	70,760,718	39,933,253
1914.....	180	15,787	9,795,728	18,579,545	38,270,552	21,691,007
1909.....	183	16,010	10,281,761	18,332,107	42,228,547	23,896,440
1904.....	158	14,861	8,625,474	14,458,705	32,839,589	18,380,884
1899.....	160	12,205	6,531,366	11,658,957	26,114,353	14,455,396
Percent of increase or decrease (-):						
1929-31.....	-8.9	-29.6	-43.7	-56.1	-46.7	-42.3
1927-29.....	0.6	-5.9	-5.7	-14.3	-1.8	5.3
1925-27.....	-2.7	-0.9	0.4	-5.4	0.6	4.4
1923-25.....	1.1	-1.2	3.8	8.2	7.1	6.4
1921-23.....	7.1	15.3	28.9	43.5	39.0	36.4
1919-21.....	1.2	-7.0	-2.5	-30.7	-17.5	-7.4
1921-31.....	-3.6	-29.6	-28.6	-44.8	-21.5	-8.0
1919-29.....	7.2	-1.3	23.6	-12.8	21.4	47.7
1909-19.....	-8.7	-4.0	77.7	68.2	67.6	67.1
1899-1909.....	8.3	36.1	57.4	57.2	61.7	55.3
<i>States, 1931</i>						
California.....	6	16	\$15,688	\$18,572	\$67,095	\$48,523
Connecticut.....	33	4,448	4,431,013	2,761,466	17,103,230	14,351,794
Illinois.....	6	97	148,508	126,645	447,356	320,711
Maryland.....	4	231	389,233	339,550	1,211,934	872,384
Massachusetts.....	33	1,968	2,125,541	2,065,278	6,749,119	4,683,841
New Jersey.....	16	567	736,450	474,008	1,529,244	1,055,236
New York.....	52	2,298	3,297,043	3,975,304	12,542,825	8,567,521
Other States ³	13	1,452	1,569,510	2,041,547	6,164,028	4,122,481

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

³ Indiana, 2 establishments; Maine, 1; Michigan, 1; North Carolina, 1; Ohio, 2; Pennsylvania, 1; Rhode Island, 4; Virginia, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average num- ber em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931-----	11, 077	11, 485	11, 828	11, 824	11, 438	11, 217	10, 810	10, 800	10, 563	10, 825	11, 003	10, 836	10, 800
1929-----	15, 735	15, 265	15, 493	15, 651	15, 555	15, 566	15, 547	15, 484	15, 575	15, 986	16, 387	16, 379	15, 914
1925-----	16, 877	16, 649	16, 794	16, 808	16, 704	16, 426	16, 332	15, 104	16, 728	17, 205	17, 814	18, 043	17, 908
1919-----	15, 945	13, 658	14, 034	14, 814	15, 302	15, 812	15, 716	15, 964	16, 683	16, 976	17, 296	17, 465	17, 621
1914 ¹ -----	15, 787	16, 100	16, 395	16, 465	16, 159	15, 877	15, 593	14, 669	15, 335	15, 627	15, 983	15, 861	15, 440
<i>States, 1931</i>													
California-----	16	16	16	16	16	15	15	15	15	16	16	16	18
Connecticut-----	4, 448	4, 752	4, 767	4, 765	4, 631	4, 553	4, 476	4, 304	4, 328	4, 320	4, 209	4, 151	4, 122
Illinois-----	97	96	110	95	95	90	91	89	94	97	106	97	103
Maryland-----	231	232	229	227	225	228	225	230	234	233	236	238	241
Massachusetts-----	1, 963	1, 895	2, 090	2, 083	1, 952	2, 001	1, 856	1, 887	1, 886	1, 974	1, 981	2, 005	2, 005
New Jersey-----	567	569	576	597	584	585	603	581	556	541	550	543	577
New York-----	2, 298	2, 306	2, 396	2, 422	2, 348	2, 267	2, 148	2, 063	2, 120	2, 255	2, 458	2, 395	2, 405

¹ No comparable figures can be given for years prior to 1914.

TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1931, 1929, AND 1927

[The figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers]

KIND	1931	1929	1927
1. Silverware and Plated Ware industry, all products, total value.	\$45, 814, 831	\$85, 882, 325	\$87, 424, 200
2. Silverware and plated ware made in the industry	43, 331, 057	78, 235, 046	(¹)
3. Other products (not normally belonging to the industry)	2, 240, 552	5, 289, 814	(¹)
4. Receipts for custom and repair work	243, 222	2, 357, 465	(¹)
5. Silverware and plated ware made as secondary products in other industries	481, 581	435, 361	(¹)
Silverware and plated ware, all industries:			
Aggregate value (sum of 2 and 5)	43, 812, 638	78, 670, 407	81, 800, 673
Silverware (sterling), total value.	14, 984, 860	26, 167, 556	27, 757, 156
Flatware, including cutlery ²	7, 475, 526	11, 254, 910	11, 907, 685
Hollow ware ²	5, 746, 986	10, 432, 147	12, 882, 295
Novelties	639, 504	1, 241, 815	
Toiletware	628, 779	1, 749, 957	1, 557, 225
Other silverware	495, 755	1, 489, 227	1, 409, 951
Electro-silver-plated ware, total value.	21, 855, 564	44, 023, 305	48, 377, 751
Flatware, hotel patterns, including cutlery ²	1, 596, 130	2, 679, 941	30, 517, 027
Flatware, commercial patterns	13, 988, 912	27, 092, 186	
Hollow ware, hotel services	1, 569, 606	2, 522, 418	16, 886, 300
Hollow ware, commercial lines ³	3, 427, 154	9, 121, 972	
Novelties and toiletware	608, 502	1, 286, 942	974, 364
Other electro-silver-plated articles	665, 250	1, 910, 846	
Plated ware other than silver-plated ware	1, 254, 328	4, 941, 305	5, 665, 766
Nickel-silver ware	1, 991, 972		
Pewter ware, total value	3, 725, 924	2, 938, 241	(¹)
Hollow ware	2, 930, 278	2, 642, 202	(¹)
Novelties	795, 646	296, 039	(¹)

¹ No comparable data.

² For statistics on production of cutlery other than silver and plated cutlery, see report for Cutlery and Edge Tools.

³ Except electrical household appliances. For statistics on production of such appliances, see report for Electrical Machinery, Apparatus, and Supplies.

SMELTING AND REFINING

Description of the industries.—Establishments engaged in smelting and refining nonferrous metals are classified for census purposes under three industry designations, namely: (1) Copper, (2) Lead, and (3) Zinc. Considerable smelting and refining are done on a toll basis, but the cost of materials reported for establishments which treat ore, matte, or bullion for others includes the estimated values of such materials treated, and the value of products reported for these establishments includes the values of the metals produced. Many of the plants classified as smelters and refineries produce considerable quantities of sulphuric acid, nickel and copper sulphate, lithopone, pigments, zinc oxide, and precious metals, the values of which are included in the total value of products of the respective industries.

Duplication in cost of materials and value of products.—The total cost of materials and the total value of products include extensive duplications resulting from the use of the products of certain establishments as materials by others. For example, considerable quantities of the blister copper and lead bullion produced by smelters are used as materials by refineries. Thus the value of this blister copper and lead bullion, which represent intermediate stages in the production of refined copper and lead from the ore, appears twice in the total value of products for the industry; and a corresponding duplication enters into the total cost of materials for the industry.

Industry figures do not represent values of copper, lead, and zinc production.—The annual reports of the Bureau of Mines, Department of the Interior, show the quantities of the several classes of products of the Smelting and Refining industries; but the values of products shown for the respective industries in the table below do not apply to the quantities of copper, lead, and zinc reported by the Bureau of Mines, for the reason that the values of products of the respective industries necessarily include the values of the incidental production, within those industries, of gold, silver, and certain chemicals, and because of the further fact that the values of products of the industries include some duplication due to the use of the products of certain establishments (smelters) as materials by others (refineries). (See "Duplication in cost of materials and value of products," above.)

**SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE
UNITED STATES, 1899-1931, AND FOR EACH INDUSTRY, BY STATES, 1931**

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, furnace supplies, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
THE INDUSTRIES AS A GROUP						
<i>United States</i>						
1931.....	76	18,477	\$22,716,192	\$335,713,021	\$408,588,765	\$72,875,744
1929.....	75	30,081	49,239,319	1,199,025,259	1,345,790,941	146,774,682
1927.....	69	30,510	44,799,800	807,242,176	942,734,564	135,492,688
1925.....	71	32,992	47,947,907	912,063,567	1,067,124,899	155,061,332
1923 ²	88	35,146	51,510,128	830,089,609	952,734,111	122,644,412
1921 ²	85	19,014	25,148,682	368,331,888	430,031,904	61,700,016
1919 ²	111	39,620	55,649,412	848,755,914	972,093,552	123,337,638
1914.....	88	34,733	28,983,145	572,744,382	669,138,943	96,394,561
1909.....	95	29,707	23,036,712	510,724,661	580,417,518	69,692,857
1904.....	103	26,853	20,058,200	382,723,480	451,398,354	68,674,874
1899.....	117	24,512	15,973,626	279,655,350	358,786,472	79,131,122
Percent of increase or decrease (-):						
1929-31.....	(³)	-40.4	-53.9	-72.0	-69.6	-50.3
1927-29.....	(³)	1.5	9.9	48.5	42.8	8.3
1925-27.....	(³)	-7.5	-6.6	-11.5	-11.7	-12.6
1923-25.....	(³)	-6.1	-6.9	9.9	12.0	26.4
1921-23.....	(³)	84.8	104.8	125.4	121.5	98.8
1919-21.....	-23.4	-52.0	-54.8	-56.6	-55.8	-50.0
1921-31.....	(³)	-2.8	-9.7	-8.9	-5.0	18.1
1919-29.....	-32.4	-21.8	-11.5	41.3	38.4	19.0
1909-19.....	(³)	33.4	141.6	66.2	67.5	77.0
1899-1909.....	-18.8	21.2	44.2	82.6	61.8	-11.9
COPPER						
<i>United States</i>						
1931.....	27	8,642	\$10,708,010	\$226,519,918	\$269,383,991	\$42,864,073
1929.....	26	14,544	23,951,955	920,351,441	994,783,862	74,432,421
1927.....	26	13,924	20,581,865	527,763,711	609,299,017	81,535,306
1925.....	26	15,588	22,641,626	573,190,428	665,176,767	91,986,339
1923.....	29	16,777	25,459,160	554,099,924	625,432,965	71,333,041
1921.....	28	8,293	11,199,279	205,903,896	234,895,245	28,991,349
1919.....	34	17,345	25,723,371	584,410,173	651,101,591	66,691,418
1914.....	37	17,731	16,149,251	379,157,030	444,021,958	64,864,928
1909.....	38	15,628	13,395,719	333,531,638	378,805,674	45,274,336
1904.....	40	12,752	10,827,043	196,736,986	240,780,216	44,043,230
1899.....	47	11,324	8,629,021	122,174,129	165,131,670	42,957,541
Percent of increase or decrease (-):						
1929-31.....	(³)	-40.6	-55.3	-75.4	-72.9	-42.4
1927-29.....	-----	4.5	16.4	74.4	63.3	-8.7
1925-27.....	-----	-10.7	-9.1	-7.9	-8.4	-11.4
1923-25.....	(³)	-7.1	-11.1	3.4	6.4	29.0
1921-23.....	(³)	102.3	127.3	169.1	166.3	146.0
1919-21.....	(³)	-52.2	-56.5	-64.8	-63.9	-56.5
1921-31.....	(³)	4.2	-4.4	10.0	14.7	47.9
1919-29.....	(³)	-16.1	-6.9	57.5	52.8	11.6
1909-19.....	(³)	11.0	92.0	75.2	71.9	47.3
1899-1909.....	(³)	38.0	57.1	173.0	129.4	5.4
States, 1931						
Arizona.....	9	1,774	\$2,111,186	\$23,736,961	\$33,527,135	\$9,790,174
New Jersey.....	3	2,484	3,343,773	69,781,972	82,071,401	12,309,429
Other States ⁴	15	4,384	5,253,051	133,020,985	153,785,455	20,764,470
LEAD						
<i>United States</i>						
1931.....	16	2,584	3,569,193	78,744,573	90,726,257	11,981,684
1929.....	19	4,819	7,577,094	208,913,730	232,115,009	28,201,279
1927.....	18	5,398	7,689,680	202,859,134	225,137,872	22,278,738
1925.....	17	6,115	9,001,580	254,881,029	283,042,542	28,161,513
1923.....	20	6,194	8,767,924	207,314,578	227,735,149	20,420,571
1921.....	23	4,509	5,957,961	134,061,121	150,593,779	16,632,658

See footnotes at end of table.

SUMMARY FOR THE INDUSTRIES, IN COMBINATION AND SEPARATELY, FOR THE UNITED STATES, 1899-1931, AND FOR EACH INDUSTRY, BY STATES, 1931—Continued

(See note at head of table)

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, furnace supplies, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
LEAD—continued						
<i>United States—Contd.</i>						
1919.....	25	6,438	\$9,179,615	\$179,373,646	\$196,794,519	\$17,420,873
1914.....	22	7,385	0,134,274	154,014,765	171,578,587	17,563,822
1909.....	28	7,424	5,430,652	151,903,022	167,405,650	15,442,628
1904.....	32	7,573	5,374,691	168,958,076	185,826,839	16,868,763
1899.....	39	8,319	5,088,684	144,195,163	175,466,304	31,271,141
Percent of increase or decrease (—):						
1929-31.....	(3)	—46.4	—52.9	—61.4	—60.9	—57.5
1927-29.....	(9)	—10.7	—1.5	.5	3.1	26.6
1925-27.....	(9)	—11.7	—14.6	—20.4	—20.5	—20.9
1923-25.....	(9)	—1.3	2.7	22.9	24.3	37.9
1921-23.....	(9)	37.4	47.2	54.6	51.2	23.5
1919-21.....	(9)	—30.0	—35.1	—25.3	—23.5	—5.1
1921-31.....	(3)	—42.7	—40.1	—41.3	—39.8	—27.5
1919-29.....	(3)	—25.1	—17.5	13.7	17.9	61.9
1909-19.....	(9)	—13.3	69.0	18.0	17.6	12.8
1899-1909.....	(9)	—10.8	6.7	5.4	—4.6	—60.6
<i>States, 1931</i>						
Utah.....	3	681	\$956,905	\$7,099,948	\$8,538,384	\$1,438,436
Other States ²	13	1,903	2,612,228	71,644,625	82,187,873	10,543,248
ZINC						
<i>United States</i>						
1931.....	33	7,251	8,438,989	30,448,530	48,478,517	18,029,937
1929.....	30	11,618	17,710,270	74,760,088	118,901,070	44,140,882
1927.....	25	11,188	16,528,264	76,619,331	108,297,975	21,678,644
1925.....	28	11,289	16,304,701	83,092,110	118,906,590	34,913,450
1923.....	35	11,918	16,895,884	64,134,114	94,183,900	30,040,786
1921.....	29	5,778	7,243,760	24,312,208	37,482,675	13,170,467
1919.....	39	13,796	17,783,278	70,014,728	104,122,938	34,108,210
1914.....	29	9,617	6,699,620	39,572,587	53,538,408	13,665,811
1909.....	29	6,655	4,210,341	25,230,001	34,205,894	8,575,893
1904.....	31	6,528	3,856,466	17,028,418	24,701,299	7,762,881
1899.....	31	4,860	2,355,921	13,286,058	18,188,498	4,902,440
Percent of increase or decrease (—):						
1929-31.....	(3)	—37.6	—52.3	—59.3	—59.2	—59.2
1927-29.....	(9)	3.8	7.2	—2.4	9.8	30.3
1925-27.....	(9)	—9	1.4	—8.8	—8.9	—9.3
1923-25.....	(9)	—5.3	—3.5	31.0	26.2	16.2
1921-23.....	(9)	100.3	133.2	163.8	151.3	128.2
1919-21.....	(9)	—58.1	—59.3	—65.3	—64.0	—61.4
1921-31.....	(3)	25.5	16.5	25.2	29.3	36.9
1919-29.....	(9)	—15.8	—4	6.8	14.2	29.4
1909-19.....	(9)	107.3	322.4	177.5	204.4	280.0
1899-1909.....	(9)	36.7	78.7	89.0	88.1	83.1
<i>States, 1931</i>						
Illinois.....	8	2,200	\$2,378,382	\$6,866,074	\$11,163,243	\$4,297,169
Oklahoma.....	3	489	404,683	1,897,605	2,580,168	712,563
Pennsylvania.....	5	2,727	3,007,167	9,951,713	10,537,861	6,586,148
Other States ³	17	1,835	2,648,757	11,763,138	18,197,245	6,434,107

¹ Value of products less cost of materials, furnace supplies, fuel, and purchased electric energy. See sec. 20, p. 11.² The figures for 1923, 1921, and 1919 include data for establishments engaged in the smelting and refining of nonferrous metals other than copper, lead, or zinc, as follows: 1923, 4 establishments; 1921, 5; 1919, 13. The totals for these years for the industries as a group are, therefore, slightly in excess of the sums of the corresponding items for the 3 industries.³ Percent not computed where base is less than 100.⁴ California, 1 establishment; Maryland, 1; Michigan, 3; Montana, 2; Nevada, 1; New York, 1; Tennessee, 2; Texas, 2; Utah, 1; Washington, 1.⁵ California, 1 establishment; Colorado, 1; Idaho, 1; Illinois, 2; Indiana, 2; Kansas, 1; Missouri, 2; Montana, 1; Nebraska, 1; Oklahoma, 1.⁶ Arkansas, 1 establishment; California, 1; Colorado, 1; Idaho, 1; Indiana, 1; Kansas, 2; Montana, 3; New Mexico, 1; Ohio, 2; Texas, 1; West Virginia, 2; Wisconsin, 1.

STAMPED WARE, ENAMELED WARE, AND METAL STAMPINGS; ENAMELING, JAPANING, AND LACQUERING

[A preliminary report for this industry was issued under date of Nov. 16, 1932]

Description of the industry.—This industry classification embraces establishments engaged primarily in the manufacture, from sheet metal other than aluminum, of automotive and other industrial stampings, license plates, bottle and jar seals and caps, and kitchen utensils and other household ware, and in the enameling, japaning, or lacquering of some of these articles. The classification also covers establishments engaged in custom stamping, enameling, japaning, and lacquering materials owned by others. (Stamped aluminum ware is a product of the "Aluminum manufactures" industry, and enameled-iron sanitary ware is a product of the "Plumbers' supplies, not including pipe or vitreous-china sanitary ware" industry.)

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>United States</i>						
1931.....	566	28,378	\$30,661,855	\$53,618,345	\$122,696,407	\$69,078,062
1929.....	582	40,000	50,091,700	87,639,495	204,306,134	116,666,639
1927.....	476	30,853	38,172,046	68,880,260	180,936,053	82,055,784
1925.....	465	31,254	38,276,937	79,736,661	160,991,786	81,255,125
1923.....	412	36,552	44,348,384	86,340,191	178,371,354	90,031,163
1921.....	388	24,807	27,879,975	49,262,541	103,105,530	53,812,989
1919.....	433	35,237	35,902,259	66,628,109	147,069,783	80,441,674
1914.....	382	30,273	16,041,418	33,536,328	67,668,207	34,131,879
1909.....	347	27,538	12,378,464	27,872,521	54,938,019	27,065,498
1904.....	298	23,523	9,490,517	17,919,208	38,274,391	20,355,183
1899.....	306	17,837	6,064,097	12,855,304	24,740,206	11,884,902
Percent of increase or decrease (-):						
1929-31.....	-2.7	-29.1	-38.8	-38.8	-39.9	-40.8
1927-29.....	22.3	29.6	31.2	27.2	35.4	42.2
1925-27.....	2.4	-1.3	-3	-13.6	-6.2	1.0
1923-25.....	12.0	-14.5	-13.7	-7.6	-8.7	-9.7
1921-23.....	6.2	47.3	59.1	75.2	71.1	67.3
1919-21.....	-10.4	-29.6	-22.3	-26.0	-29.9	-33.1
1914-19.....	45.9	14.4	10.0	8.8	19.0	28.4
1912-31.....	34.4	29.6	39.5	31.5	38.9	45.0
1919-29.....	24.8	28.0	190.0	139.0	167.7	197.2
1909-19.....	24.8	28.0	190.0	139.0	167.7	197.2
1899-1909.....	13.4	54.4	104.1	116.8	122.1	127.7
<i>States, 1931</i>						
California.....	21	443	\$519,916	\$872,655	\$2,146,075	\$1,273,420
Connecticut.....	20	1,266	1,224,987	1,347,728	3,726,021	2,378,293
Illinois.....	76	2,798	3,298,671	6,814,653	15,196,068	8,381,413
Indiana.....	21	1,556	1,329,539	2,350,383	5,818,640	3,468,257
Iowa.....	4	88	101,638	250,827	492,228	241,401
Maryland.....	14	1,671	1,580,485	5,004,802	9,976,317	4,971,515
Massachusetts.....	41	1,056	1,267,538	1,807,482	4,583,670	2,776,188
Michigan.....	55	2,102	2,608,725	3,498,782	8,170,584	4,671,802
Minnesota.....	4	53	57,966	101,935	255,925	164,990
Missouri.....	19	960	1,004,680	2,171,309	4,001,312	1,830,003

See footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products ¹	Value added by manufacture ²
<i>States, 1931—Continued</i>						
New Jersey.....	33	1,483	\$1,860,527	\$1,537,829	\$4,404,283	\$2,866,464
New York.....	98	3,087	4,615,359	7,607,594	19,476,141	11,808,547
Ohio.....	72	4,895	5,385,862	9,380,145	21,266,353	11,886,208
Pennsylvania.....	35	1,527	1,687,425	2,729,757	6,230,330	3,500,573
Rhode Island.....	13	400	349,432	226,155	931,712	705,557
Tennessee.....	3	508	372,448	700,459	1,519,012	818,553
West Virginia.....	5	1,124	1,107,717	3,353,582	5,933,883	2,580,301
Wisconsin.....	19	2,216	2,076,662	3,434,865	7,686,301	4,251,436
Other States ³	13	225	212,278	367,403	880,554	513,151

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.² Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.³ Colorado, 1 establishment; Kansas, 2; Kentucky, 2; Maine, 1; Nebraska, 1; New Hampshire, 1; Oregon, 1; Utah, 1; Virginia, 1; Washington, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8.]

	Average number employed during year	NUMBER REPORTED FOR--											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	28,378	27,241	28,825	29,687	30,359	30,042	29,023	28,227	28,321	28,487	27,851	26,737	25,736
1929.....	40,000	37,486	39,306	41,623	41,845	41,529	41,258	41,306	41,355	40,952	40,392	37,561	36,302
1925.....	31,254	30,046	31,340	31,785	32,584	32,363	31,680	31,041	31,799	29,757	31,009	30,895	30,743
1919.....	35,237	32,191	33,173	33,027	32,828	33,785	33,776	34,855	36,350	37,056	37,944	38,852	38,998
1914 ¹	30,273	30,334	31,369	32,380	32,131	31,679	30,788	29,919	29,635	29,798	29,618	27,838	27,757
<i>States, 1931</i>													
California.....	443	436	424	432	441	423	<i>415</i>	434	481	484	460	452	431
Connecticut.....	1,266	1,217	1,294	1,289	1,320	1,282	1,270	1,249	1,247	1,273	1,328	1,283	1,155
Illinois.....	2,798	2,504	2,741	2,867	3,054	3,050	2,964	2,906	2,933	2,912	2,636	2,529	2,476
Indiana.....	1,556	1,561	1,621	1,672	1,735	1,722	1,671	1,635	1,516	1,420	1,426	1,317	1,372
Iowa.....	88	82	86	95	94	98	95	83	94	97	93	68	66
Maryland.....	1,671	1,612	1,648	1,651	1,698	1,683	1,664	1,660	1,760	1,759	1,732	1,652	1,538
Massachusetts.....	1,056	974	1,051	1,122	1,205	1,276	1,100	986	1,000	1,013	1,006	1,018	951
Michigan.....	2,102	1,970	2,139	2,301	2,496	2,617	2,294	2,157	1,911	1,848	1,775	1,790	1,832
Minnesota.....	53	29	37	44	48	38	43	91	87	65	63	43	45
Missouri.....	980	934	952	986	907	1,027	1,067	1,071	1,044	981	948	888	870
New Jersey.....	1,483	1,531	1,559	1,539	1,519	1,461	1,398	1,394	1,479	1,543	1,566	1,469	1,345
New York.....	3,987	3,814	3,909	4,042	4,111	4,035	4,007	4,047	3,969	4,064	4,057	3,970	3,807
Ohio.....	4,895	4,700	5,111	5,292	5,398	5,306	5,190	4,595	4,632	4,691	4,679	4,669	4,547
Pennsylvania.....	1,527	1,485	1,530	1,548	1,557	1,616	1,488	1,459	1,501	1,587	1,645	1,505	1,448
Rhode Island.....	400	415	440	389	369	298	296	390	405	600	435	338	331
Tennessee.....	508	470	555	531	556	495	468	545	637	624	554	384	275
West Virginia.....	1,124	1,041	1,110	1,178	1,263	1,218	1,160	1,143	1,152	1,175	1,081	1,005	962
Wisconsin.....	2,216	2,254	2,382	2,363	2,354	2,272	2,239	2,170	2,095	2,087	2,090	2,152	2,065

¹ No comparable statistics for years prior to 1914.

STAMPED AND ENAMELED WARE, ETC.

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TABLE 3.—PRODUCTS, BY KIND AND VALUE, FOR THE UNITED STATES: 1931 AND 1929

[Figures for 1931 represent production; those for 1929 refer to sales (shipments or deliveries) by manufacturers. See sec. 10, p. 9]

KIND	1931	1929
1. "Stamped and Enameled Ware, Metal Stampings; Enameling, Japanning, and Lacquering" industry, all products.....	\$122,696,407	\$204,306,134
2. Stamped and enameled ware.....	106,611,076	171,046,794
3. Other products (not normally belonging to the industry).....	10,871,877	21,584,296
4. Receipts for custom stamping and enameling.....	5,213,454	11,675,044
5. Value of stamped and enameled ware and receipts for custom stamping and enameling reported by establishments in other industries.....	23,625,765	1 44,896,002
Stamped and enameled ware, metal stampings, and receipts for custom stamping, enameling, japanning, and lacquering, all industries:		
Aggregate value (sum of 2, 4, and 5).....	135,450,295	1 227,617,846
Stamped household ware other than vitreous-enameled and aluminum ware, total.....	18,453,871	33,213,148
Galvanized-iron ware.....	6,583,628	8,585,481
Tinware.....	7,716,436	11,743,969
Japanned, lacquered, and paint-enameled ware.....	2,162,703	4,421,370
Other household ware.....	1,991,104	8,462,328
Automotive stampings.....	25,887,880	56,985,027
Other stampings.....	35,230,988	55,838,399
Vitreous-enameled ware, total 2.....	23,082,816	35,017,903
Household ware.....	16,075,467	23,500,948
Hospital ware.....	493,029	657,448
Other vitreous-enameled ware.....	6,514,320	10,859,507
Perforated metals.....	1,887,563	4,300,194
Bottle caps.....	25,393,925	1 30,588,125
Receipts for custom work on materials owned by others, total.....	5,513,252	11,675,044
Custom stamping.....	1,127,181	4,558,800
Vitreous-enameling.....	3,209,234	4,698,891
Japanning, lacquering, and paint-enameling.....	1,176,837	2,417,263

1 Revised.

2 Not including enameled-iron sanitary ware. See "Description of the industry," p. 919.

TABLE 4.—PRODUCTS, BY KIND AND VALUE, BY STATES: 1931

[This table gives statistics for each State for which it is possible to publish separate figures without disclosing, exactly or approximately, the output of individual establishments. In some cases, however, certain of the "Other States" outrank some of the States for which separate figures are given]

KIND AND STATE	Value	KIND AND STATE	Value
Stamped ware, enameled ware, metal stampings, and receipts for custom stamping, enameling, japanning, and lacquering, total.....	\$135,450,295	Stamped ware, etc.—Continued. Other stampings—Continued.	
Stamped household ware other than vitreous-enameled and aluminum ware:		Illinois.....	\$3,364,400
Galvanized-iron ware, total.....	6,583,628	Indiana.....	974,156
Massachusetts.....	299,566	Maryland.....	627,067
Missouri.....	947,755	Massachusetts.....	2,626,939
New York.....	961,231	Michigan.....	3,016,568
Other States.....	4,375,076	Missouri.....	1,001,142
Tinware, total.....	7,716,436	New Jersey.....	2,163,131
Maryland.....	417,530	New York.....	5,716,689
New York.....	2,030,552	Ohio.....	5,612,141
Other States.....	5,268,354	Pennsylvania.....	1,860,331
Japanned, lacquered, and paint-enameled ware, total.....	2,162,703	Rhode Island.....	623,931
Illinois.....	93,884	Wisconsin.....	548,069
New York.....	570,262	Other States.....	1,099,739
Other States.....	1,498,557	Vitreous-enameled ware:	
Other household ware, total.....	1,991,104	Vitreous-enameled household ware, total.....	19,075,467
Illinois.....	130,715	Ohio.....	5,608,610
New York.....	607,597	Wisconsin.....	1,752,749
Pennsylvania.....	221,229	Other States.....	8,714,108
Other States.....	941,563	Vitreous-enameled hospital ware.....	493,029
Automotive stampings, total.....	25,887,880	Other vitreous-enameled ware, total.....	6,514,320
Illinois.....	993,363	Illinois.....	403,816
Indiana.....	1,107,015	Michigan.....	354,455
Massachusetts.....	970,821	New York.....	391,579
Michigan.....	12,862,934	Ohio.....	1,297,301
New Jersey.....	124,008	Pennsylvania.....	473,474
New York.....	1,073,234	Other States.....	3,593,565
Ohio.....	6,613,868	Perforated metals, total.....	1,887,563
Wisconsin.....	616,999	Illinois.....	692,655
Other States.....	1,525,638	Other States.....	1,194,938
Other stampings, total.....	35,230,988	Bottle caps, total.....	25,393,925
California.....	665,778	Illinois.....	3,964,554
Connecticut.....	4,830,987	New York.....	7,929,599
		Other States.....	13,499,472
		Amount received for custom work on materials owned by others.....	5,513,252

TIN AND OTHER FOILS, NOT INCLUDING GOLD FOIL

[A preliminary report for this industry was issued under date of Sept. 14, 1932]

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of tin, lead, aluminum, and composition foils.

SUMMARY: 1931, 1929, 1927, AND 1925

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, con- tainers, fuel, and pur- chased elec- tric energy	Value of products ¹	Value added by manufac- ture ²
1931-----	8	1,218	\$997,847	\$7,382,938	\$12,225,641	\$4,842,703
1929-----	7	1,710	1,856,371	13,548,399	20,954,849	7,406,450
1927-----	10	1,658	2,083,578	15,350,016	20,951,679	5,601,663
1925-----	10	1,670	2,124,422	15,648,376	20,611,277	4,962,901
Percent of increase or de- crease (—):						
1929-31-----	(³)	-28.8	-46.2	-45.5	-41.7	-34.6
1927-29-----	(³)	3.1	-10.9	-11.7	(³)	32.2
1925-27-----		-0.7	-1.9	-1.9	1.7	12.9

¹ For 1929, manufacturers' sales (shipments or deliveries); for other years, production. See sec. 16, p. 9.

² The values here given include those of miscellaneous commodities made as secondary products by establishments in this industry but do not include the values of tin and other foils made as secondary products in other industries. The total production of tin and other foils (except gold foil) in all industries, as reported for the last 3 census years, was as follows: For 1931, 64,786,116 pounds, valued at \$11,780,210; 1929, 96,188,082 pounds, \$21,862,284; 1927, 97,870,499 pounds, \$22,671,405. No comparable data available for 1925.

³ Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

⁴ California, 1 establishment; Illinois, 1; Kentucky, 1; Missouri, 1; New York, 2; Pennsylvania, 1; Virginia, 1. No State figures can be given for this industry without disclosing, exactly or approximately, the data reported by individual establishments.

⁵ Percent not computed where base is less than 100.

⁶ Less than one-tenth of 1 percent.

WATCHCASES

[A preliminary report for this industry was issued under date of Nov. 5, 1932]

Description of the industry.—This industry classification covers establishments engaged primarily in the manufacture of watchcases for sale as such. Establishments which install purchased movements in cases of their own manufacture are assigned to the "Clocks, Watches, Time-Recording Devices, and Materials and Parts, Except Watchcases" industry, and their product is reported as watches.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899 TO 1931, AND FOR NEW YORK, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. New York is the only State for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products	Value added by manufacture ¹
<i>United States</i>						
1931.....	31	1,009	\$1,766,749	\$1,361,195	\$4,219,133	\$2,857,938
1929.....	40	3,404	4,626,111	4,631,225	13,491,045	8,859,820
1927.....	40	3,360	4,326,393	5,310,674	13,724,703	8,414,023
1925.....	45	3,480	4,462,587	6,049,905	14,793,211	8,743,305
1923.....	57	4,325	5,414,232	7,498,708	17,817,046	10,318,278
1921.....	37	3,698	4,217,210	5,625,146	13,805,957	8,180,811
1919.....	33	3,900	4,000,727	8,205,754	19,618,773	11,413,019
1914.....	31	3,514	1,938,358	4,001,595	7,830,987	3,829,392
1909.....	29	4,569	2,428,262	5,034,377	10,514,854	5,480,477
1904.....	28	4,221	2,170,507	4,428,627	8,626,504	4,197,877
1899.....	30	3,907	1,924,847	4,393,647	7,783,960	3,390,313
Percent of increase or decrease (-):						
1929-31.....	(²)	-51.0	-61.8	-70.6	-68.7	-67.7
1927-29.....		1.3	6.9	-12.8	-1.7	5.3
1925-27.....	(²)	-3.4	-3.1	-12.2	-7.2	-3.8
1923-25.....	(²)	-19.5	-17.6	-19.3	-17.0	-15.3
1921-23.....	(²)	17.0	28.4	33.3	29.1	26.1
1919-21.....	(²)	-5.2	5.4	-31.4	-29.6	-28.3
1921-31.....	(²)	-54.9	-58.1	-75.8	-69.4	-65.1
1919-29.....	(²)	-12.7	15.6	-43.6	-31.2	-22.4
1909-19.....	(²)	-14.6	64.8	63.0	86.6	108.2
1899-1909.....	(²)	16.9	26.2	14.6	35.1	61.7
<i>States, 1931</i>						
New York.....	24	242	\$411,929	\$473,419	\$1,157,459	\$684,040
Other States ³	7	1,427	1,354,820	887,776	3,061,674	2,173,868

¹ Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

² Percent not computed where base is less than 100.

³ Illinois, 1 establishment; Kentucky, 1; Michigan, 1; New Jersey, 1; Ohio, 1; Rhode Island, 2.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, AND 1914, AND FOR NEW YORK, 1931

[New York is the only State for which figures can be given without disclosing approximations of data for individual establishments. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	1,609	<i>1,482</i>	1,637	1,751	1,710	1,673	1,629	1,691	1,751	1,779	1,801	1,632	1,495
1929.....	3,404	3,384	3,399	3,431	3,380	3,299	3,272	<i>3,227</i>	3,382	3,513	3,634	3,527	3,415
1925.....	3,480	<i>3,528</i>	3,365	3,334	3,359	3,382	3,439	3,302	3,526	3,576	3,705	3,731	3,627
1919.....	3,900	<i>3,625</i>	3,759	3,767	3,797	3,841	3,970	4,070	4,068	3,840	3,737	4,034	4,283
1914.....	3,514	3,887	3,859	3,825	3,805	3,699	3,659	3,283	3,382	3,312	3,209	3,161	<i>3,087</i>
New York, 1931.....	242	255	227	228	221	224	<i>218</i>	228	254	271	285	270	220

TABLE 3.—WATCHCASES—PRODUCTION, BY KIND, NUMBER, AND VALUE, FOR THE UNITED STATES: 1931 AND 1929

[The figures in this table differ from the values of products given in table 1 because of the inclusion herein of data for watchcases reported as secondary products by establishments engaged primarily in other lines of manufacture, and the exclusion of data for products other than watchcases made by establishments in this industry]

KIND	1931		1929	
	Number	Value	Number	Value
Watchcases produced for sale as such, total value.....		\$3,348,917		\$11,503,586
Solid platinum, gold, and silver:				
Men's.....	15,660	177,057	172,296	1,624,820
Women's.....	70,189	443,891	203,693	1,240,221
Gold-filled:				
Men's.....	314,005	781,192	1,205,729	3,942,333
Women's.....	375,199	685,781	623,226	1,307,953
Other metals:				
Men's.....	255,789	112,323	1,075,335	899,213
Women's.....	200,797	124,593	476,331	445,348
Cases not reported by number and kind.....		1,024,080		2,043,648

Group 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT

THE GROUP AS A WHOLE

This group comprises those industries whose primary products are machinery (not including transportation equipment) and special castings or parts for use in the manufacture of machinery.

Group 13 differs from the corresponding one as constituted at the census for 1929, the changes being as follows:

(1) The manufacture of phonographs, formerly classified as a separate industry in Group 16, and that of radio apparatus, formerly included in the Electrical Machinery, Apparatus, and Supplies industry in Group 13, have been combined under the title "Radio Apparatus and Phonographs," in this group.

(2) The processing of iron and steel (heat-treating, hardening, tempering, annealing, rust-proofing, etc.) by establishments engaged primarily in this line of work, chiefly on a contract basis, formerly classified as a separate industry in Group 11, is now included in the Foundry and Machine-Shop Products industry in Group 13.

Summary statistics for the group as a whole and for each industry separately are presented in the table beginning below; and detailed reports for the several industries, all of which have been published separately in pamphlet form, will be found on pages 929 to 1020.

SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1921 to 1931

INDUSTRY	Census year	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, containers, fuel, and purchased electric energy	Value of products	by manufacture ¹
Total for the group..	1931	11, 184	686, 706	\$786, 935, 724	\$1, 195, 165, 753	\$3, 364, 864, 087	\$2, 169, 698, 334
	1929	12, 955	1, 091, 269	1, 634, 165, 729	2, 694, 379, 629	7, 043, 380, 390	4, 340, 000, 761
	1927	11, 982	883, 508	1, 284, 132, 534	2, 053, 941, 924	5, 348, 723, 728	3, 294, 781, 804
	1925	11, 807	858, 843	1, 225, 350, 140	1, 985, 367, 067	5, 020, 281, 100	3, 034, 914, 053
	1923	12, 147	907, 707	1, 253, 742, 642	1, 891, 524, 106	4, 727, 818, 290	2, 836, 264, 124
	1921	12, 395	662, 277	832, 782, 828	1, 361, 163, 280	3, 235, 074, 806	1, 873, 911, 626
Agricultural implements..	1931	219	17, 529	19, 106, 105	32, 243, 922	84, 287, 608	52, 043, 586
	1929	293	41, 663	58, 941, 939	113, 969, 484	277, 854, 462	163, 884, 678
	1927	277	33, 346	46, 415, 459	85, 666, 186	202, 732, 126	117, 065, 640
	1925	303	28, 666	37, 387, 620	73, 850, 060	169, 467, 066	95, 617, 906
	1923	312	30, 962	40, 510, 534	63, 491, 886	151, 286, 248	87, 794, 362
	1921	353	30, 359	39, 835, 414	87, 267, 274	163, 816, 679	76, 549, 405
Cash registers and adding, calculating, and card-tabulating machines.	1931	41	12, 176	14, 982, 432	5, 268, 857	56, 474, 299	51, 205, 442
	1929	46	16, 840	29, 745, 865	10, 766, 013	110, 000, 986	99, 234, 973
	1927	41	14, 372	21, 756, 094	11, 132, 191	106, 844, 969	95, 712, 778
	1925	41	13, 296	21, 142, 430	11, 165, 658	98, 383, 910	87, 218, 262
	1923	37	14, 971	22, 775, 197	12, 483, 128	95, 105, 570	82, 622, 442
	1921	49	9, 786	13, 243, 471	9, 572, 828	53, 652, 943	44, 080, 115

For footnotes, see p. 928.

MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT 927

SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1921 to 1931—Continued

INDUSTRY	Cen- sus year	Num- ber of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, containers, fuel, and purchased electric energy	Value of products	Value added by manu- facture ¹
Electrical machinery, apparatus, and sup- plies. ⁴	1931 1931 1929 1927 1925 1923 1921	1,379 1,567 1,802 1,777 1,739 1,671 1,333	180,106 214,734 328,722 241,506 239,921 234,892 161,204	\$204,488,041 237,755,467 456,377,629 336,238,750 323,834,541 305,455,263 194,242,357	\$337,124,534 423,510,892 971,017,623 645,701,690 636,692,076 548,626,673 344,069,963	\$995,010,213 1,179,407,754 2,300,915,572 1,637,307,035 1,540,002,041 1,293,001,771 533,985,443	\$657,885,679 755,396,882 1,329,897,949 991,545,336 903,309,965 744,375,098 489,915,480
Engines, turbines, trac- tors, water wheels, and windmills. ⁵	1931 1929 1927 1925 1923 1921	204 214 231 235 265 320	34,130 62,702 55,090 52,490 49,596 36,950	39,233,854 100,849,682 86,072,291 75,415,153 72,308,921 53,585,849	82,514,937 206,471,909 168,436,394 149,159,260 127,135,066 115,157,800	193,962,805 465,857,934 375,392,737 321,571,856 273,308,819 206,028,179	111,447,868 259,385,965 206,956,343 172,412,587 146,173,750 90,870,319
Foundry and machine- shop products not else- where classified. ⁶	1931 1929 1927 1925 1923 1921	7,221 8,605 8,095 8,380 8,203 8,631 9,013	284,909 454,441 398,672 403,939 403,832 448,777 321,363	328,459,306 697,508,589 690,624,020 601,022,908 600,021,745 642,431,394 412,350,408	452,551,064 1,038,060,092 878,771,144 883,651,734 894,400,446 636,231,003 653,363,807	1,266,619,273 2,791,461,964 2,468,653,217 2,261,543,110 2,264,375,979 2,337,072,775 1,565,526,944	814,068,209 1,753,305,872 1,389,892,073 1,407,891,376 1,369,969,539 1,400,841,772 912,163,137
Machine-tool accessories and machinists' pre- cision tools and instru- ments. ⁸	1931 1929	718 722	17,533 26,682	26,558,780 51,084,540	16,319,780 20,992,631	60,033,164 144,410,890	52,713,374 117,418,259
Machine tools-----	1931 1929 1927 1925 1923 1921	279 280 288 355 329 350 348	21,262 47,391 32,583 35,269 30,831 33,373 21,307	25,149,816 76,410,237 47,403,536 52,365,692 46,711,302 47,330,800 25,251,735	21,900,879 64,284,022 43,151,422 40,114,849 43,826,151 40,877,024 23,978,248	81,286,568 244,578,088 145,854,992 159,513,125 144,202,483 137,206,098 67,729,362	59,885,689 180,294,066 102,703,499 113,998,276 100,376,332 96,229,074 43,751,114
Meters (gas, water, etc.) and gas generators.	1931 1929 1927 1925 1923 1921	70 72 58 61 61 65	4,954 6,101 5,915 5,514 6,127 4,280	5,755,621 8,931,625 8,792,304 7,428,842 7,756,779 5,211,931	7,217,085 15,187,488 15,590,977 13,038,272 14,331,863 9,000,272	23,049,723 40,623,344 36,715,190 34,292,059 34,250,414 21,956,424	15,832,038 25,435,856 21,124,213 21,253,787 19,918,551 12,956,152
Pumps (hand and power) and pumping equip- ment.	1931 1929 1927 1925 1923 1921	303 322 278 253 229 221	15,156 23,106 18,671 17,935 14,550 12,186	17,106,556 34,920,261 27,118,924 25,278,060 19,990,603 13,969,531	33,734,650 66,802,372 52,765,023 50,328,435 34,464,720 26,803,966	84,353,391 164,009,397 130,591,191 120,148,157 92,930,058 69,962,413	50,618,741 97,207,025 77,826,168 69,819,722 58,465,336 43,158,444
Radio apparatus and phonographs. ³	1931	217	36,490	35,145,577	88,402,858	193,142,845	104,739,987
Refrigerators, mechani- cal. ⁴	1931 1929 1927	36 34 22	15,624 16,883 11,285	20,146,306 26,196,076 17,712,006	61,670,024 72,413,047 42,651,262	144,151,223 161,565,676 96,513,049	82,481,199 89,152,629 53,862,387
Scales and balances-----	1931 1929 1927 1925 1923 1921	54 59 60 71 65 65	2,814 4,118 3,906 4,292 4,245 3,720	3,232,752 5,995,475 5,460,742 5,782,680 5,500,035 4,427,986	3,644,457 7,438,190 7,453,927 7,345,704 6,594,483 4,716,313	14,561,273 30,381,424 24,655,442 27,237,181 24,156,982 15,884,770	10,916,816 22,943,224 17,201,515 19,888,477 17,562,499 11,168,467
Sewing machines and attachments. ⁹	1931 1929 1927	34 39 35	8,090 10,467 9,997	8,791,969 14,976,182 13,748,151	6,090,980 16,458,425 14,072,679	20,148,125 45,094,600 39,723,822	14,057,145 28,636,175 25,651,243

For footnotes, see p. 928.

SUMMARY FOR GROUP 13.—MACHINERY, NOT INCLUDING TRANSPORTATION EQUIPMENT: 1921 to 1931—Continued

INDUSTRY	Cen- sus year	Num- ber of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, containers, fuel, and purchased electric energy	Value of products	Value added by manu- facture ¹
Textile machinery and parts.	1931	330	18,808	\$21,238,231	\$18,175,346	\$65,798,225	\$47,622,579
	1929	376	27,019	37,830,406	30,556,299	122,438,514	85,882,215
	1927	367	26,154	36,481,196	36,180,689	116,921,130	80,740,441
	1925	379	27,569	37,469,681	39,036,898	121,653,324	82,616,456
	1923	428	35,672	46,022,545	49,705,554	140,661,358	90,955,804
	1921	421	31,025	38,830,060	44,903,788	128,934,896	84,031,108
Typewriters and parts ¹⁰ .	1931	20	10,924	10,328,036	3,785,432	22,056,898	18,271,466
	1929	26	16,945	22,319,327	7,245,601	61,857,615	54,609,014
	1927	26	15,603	19,397,911	9,936,079	55,318,864	45,352,785
Washing machines, wringers, driers, and ironing machines, for household use.	1931	59	6,201	7,212,342	24,520,948	50,928,564	26,407,616
	1929	65	8,189	12,071,916	40,707,373	82,329,924	41,622,551
	1927	75	7,789	10,950,046	34,528,335	70,244,407	35,716,072
	1925	82	7,077	9,989,875	32,748,312	69,568,206	36,819,894
	1923	85	6,144	7,839,171	25,741,775	50,372,516	24,636,741
	1921	96	4,147	4,898,188	16,621,634	30,198,566	13,576,932

¹ Value of products less cost of materials, containers, fuel, and purchased electric energy. See sec. 20, p. 11.

² Revised at census for 1929. See notes 9 and 10.

³ At the census for 1931 the manufacture of radio apparatus and tubes, formerly a part of the Electrical Machinery, Apparatus and Supplies industry, was combined with the manufacture of phonographs, formerly a separate industry in Group 16, under the new title "Radio Apparatus and Phonographs." The figures for Electrical Machinery, Apparatus, and Supplies, as constituted at the censuses for earlier years are not, therefore, strictly comparable with those for 1931. The italic figures for 1931 have been adjusted for comparison with earlier years.

⁴ The figures for "Refrigerators, Mechanical" for years prior to 1927 are included in part in those for Electrical Machinery, Apparatus, and Supplies and in part in those for Foundry and Machine-Shop Products Not Elsewhere Classified.

⁵ The manufacture of windmills and windmill towers, formerly classified as a separate industry, was combined with the Engines, Turbines, Tractors, and Water Wheels industry at the census for 1931. The figures for earlier years have been revised accordingly.

⁶ The figures for 1931 include statistics for "Iron and Steel, Processed," formerly a separate classification in Group 11. The effect of this change on the comparableness of the figures for 1931 with those for earlier years is negligible, and therefore the earlier figures have not been revised.

⁷ The statistics for this industry for 1927 and earlier years are not strictly comparable with those for 1929 and 1931. (See footnote 8.) The italic figures for 1927 have been adjusted for comparison with 1929 and 1931.

⁸ Entitled "Machine-Tool Accessories and Small Metal-Working Tools, Not Elsewhere Classified" at census for 1929. At earlier censuses some of the manufacturers of products now classified in this industry were assigned to the "Foundry and Machine Shop Products Not Elsewhere Classified" industry, others to the "Machine Tools" industry, and still others to the "Tools, Not Including Edge Tools, Machine Tools, Files, or Saws" industry, in Group 11.

⁹ At the census for 1929 establishments engaged primarily in the manufacture of sewing-machine cases, cabinets, and tables, formerly classified in this industry, were transferred to the "Furniture, Including Store and Office Fixtures" industry in Group 3. The 1927 figures for the "Sewing Machines and Attachments" industry have been adjusted by deducting the data for the establishments in question, but no similar adjustment can be made in the figures for earlier years.

¹⁰ At the censuses for 1927 and earlier years this industry included the manufacture of typewriter supplies, but at the census for 1929 a new classification, "Carbon Paper and Inked Ribbons," was established in Group 16. The figures for 1927 have been adjusted by deducting the data for establishments engaged primarily in the manufacture of carbon paper and inked ribbons, but no similar adjustments can be made for earlier years.

¹¹ Revised at census for 1929; revision not carried into total for group.

MACHINERY

[A preliminary report on "Machinery" was issued under date of Dec. 29, 1932]

Scope of report.—This report is not an industry report but is merely a special presentation of statistics for the broad group of products covered by the general designation "Machinery." These products are manufactured principally in the following-named industries:

Agricultural implements.

Aircraft and parts.

Cars, electric and steam railroad, not built in railroad repair shops.

Cash registers and adding, calculating, and card-tabulating machines.

Electrical machinery, apparatus, and supplies.

Engines, turbines, tractors, water wheels, and windmills.

Foundry and machine-shop products not elsewhere classified.

Locomotives (other than electric), not made in railroad repair shops.

Machine tools.

Meters (gas, water, etc.) and gas generators.

Motorcycles, bicycles, and parts.

Motor vehicles, not including motorcycles.

Pumps and pumping equipment.

Refrigerators, mechanical.

Scales and balances.

Sewing machines and attachments.

Textile machinery and parts.

Typewriters and parts.

Washing machines, wringers, driers, and ironing machines, for household use.

Definition of "Machinery."—The term "machinery" is here used in its popular rather than in its exact sense. Strictly speaking, the term applies to certain very simple mechanical contrivances, such as a pair of pliers, a rope and pulley, or a windlass, and also to various more complicated devices, such as timepieces and scientific instruments, which are not customarily referred to as machines and which are not included in the machinery covered by the tables herewith. Locomotives, motor-propelled steerable vehicles, and bicycles are included, but railway cars and horse-drawn vehicles are excluded. The item "Engines (steam and internal-combustion), tractors, and water wheels" covers, of course, the boilers of traction and portable steam engines, but does not cover steam boilers made for sale as separate units.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, BY NUMBER AND VALUE, FOR THE UNITED STATES: 1931 AND 1929

[All the figures for 1931 and a minor part of those for 1929 represent production, but the major part of the 1929 figures refer to manufacturers' sales (shipments or deliveries)]

KIND	1931			1929		
	Number of establishments reporting ¹	Number	Value	Number of establishments reporting ¹	Number	Value
Aggregate value.....			\$2,861,107,501			\$5,551,053,412
Adding machines.....						
Listing - adding - bookkeeping - and typewriter-bookkeeping-billing machines.....	9	51,516	5,459,730			
Typewriters:	9	10,012	6,833,092	15	520,858	47,392,765
Portable.....	6	214,119	5,842,384			
Standard, including long-carriage. Used and rebuilt.....	9	304,897	12,111,759	9	587,509	31,300,830
Addressing and mailing machines.....	8		1,239,770	5		2,273,057
Agricultural machinery, total.....	17		6,156,363	18		10,537,012
			49,954,270			167,673,051
Planting and fertilizing machinery.....	101		10,862,052	108		31,145,092
Harvesting and haying machinery.....	88		27,043,952	99		106,424,575
Machinery for preparing crops for market or for use.....	155		12,048,266	164		30,103,394
Aircraft (airplanes, seaplanes, and amphibians).....	70	2,502	22,405,198	118	6,631	51,508,120
Auto lifts.....	16		2,246,314	(⁴)		(⁴)
Bakers' machinery and equipment, total.....			10,875,830			21,720,022
Bake ovens, total.....	30		3,224,040	38		8,105,026
Number reported.....		1,912	2,931,540		3,385	5,641,298
Number not reported.....			292,500			2,464,628
Other bakers' machinery and equipment.....	60		7,651,790	67		13,622,096
Baling presses (other than hay presses), total.....	19		821,150	21		2,344,663
Number reported.....		849	524,922		2,190	1,471,707
Number not reported.....			296,228			872,866
Blowers and exhaust and ventilating fans, total.....			15,322,692	94		25,242,929
Blowers, total.....	54		4,630,948			
Number reported.....		112,207	3,964,385			
Number not reported.....			666,563			
Fans:						
16-inch and under, total.....	27		1,523,892			
Number reported.....		55,776	1,420,494			
Number not reported.....			103,498			
Over 16-inch, total.....	33		7,406,497	94		25,242,929
Number reported.....		21,777	2,860,094			
Number not reported.....			5,046,403			
Blowers and fans not reported by kind.....						
Bookbinding machinery.....	9		1,761,255	32		4,157,619
Bottlers' machinery (except for dairies).....	24		2,840,358	47		11,081,860
Calculating machines.....	4		5,653,012	6	57,201	11,616,947
Canning machinery.....	37	12,575	3,484,647	71		8,535,101
Cars, electric-railroad and self-propelled, total.....	63		4,064,515			13,481,888
Electric-railroad.....			8,264,284			
Self-propelled.....	7	368	7,158,812	14	551	6,615,793
Cars and trucks, industrial, motorized.....	5		1,105,472	6	146	6,866,595
Cash registers; card punching, sorting, and tabulating machines; change-making machines and coin counters; fare registers and fare boxes; taxicab meters; ticket-counting machines.....	17	2,191	2,816,591	(⁵)		(⁴)
	33		28,547,350	27		61,272,174

For footnotes, see end of table.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, BY NUMBER AND VALUE, FOR THE UNITED STATES: 1931 AND 1929—Continued

[All the figures for 1931 and a minor part of those for 1929 represent production, but the major part of the 1929 figures refer to manufacturers' sales (shipments or deliveries)]

KIND	1931			1929		
	Number of establishments reporting ¹	Number	Value	Number of establishments reporting ¹	Number	Value
Cement and concrete machinery, total			\$7,393,936			\$10,924,105
Cement-making machinery	16		1,670,840	18		4,387,383
Cement and concrete-block machines, total	18		416,823	22		1,147,021
Number reported		320	224,066		2,106	918,467
Number not reported			192,757			228,554
Concrete mixers, total	38		4,357,157	44		11,404,923
Number reported		4,197	4,168,780		16,145	8,809,519
Number not reported			188,377			2,595,404
Other cement and concrete machinery	21		1,040,610	43		2,984,778
Check-writing machines, total	9		1,316,032	9		2,346,239
Number reported		31,961	1,074,614		63,576	2,179,422
Number not reported			241,618			166,817
Clay-working machinery (brick, pottery, etc.)	46		1,670,504	53		4,402,093
Clothing-pressing machines	15		3,601,144	14	16,602	7,216,172
Coffee roasting and grinding machines, food choppers and grinders, food and drink mixers, slicing machines, etc., total			12,592,023	53		11,503,444
Coffee roasting and grinding machines, total	17		1,440,896			
Number reported		8,169	635,968			
Number not reported			804,928			
Coffee grinders and meat choppers combined	3	5,420	609,948			
Food choppers and grinders, total	26		2,146,285			
Number reported		111,213	1,438,687		53	11,503,444
Number not reported			707,598			
Food and drink mixers, total	15		3,395,953			
Number reported		138,876	2,794,337			
Number not reported			601,616			
Slicing machines, total	25		4,999,541			
Number reported		18,402	4,589,325			
Number not reported			410,216		16	4,386,004
Condensers	24		2,590,296			
Confectionery and ice-cream machinery	49		3,809,334	46		3,673,804
Conveying and elevating machinery, total			22,108,704			48,637,479
Belt type	90		7,152,502	90		14,206,127
Bucket type	69		2,695,489	80		9,387,390
Gravity	26		1,759,083	16		2,710,537
Pneumatic	10		1,106,049	15		1,779,515
Other types	78		7,921,674	100		20,453,910
Not reported as to type by manufacturers	7		1,473,907			
Cotton-ginning machinery	20		2,630,353	16		11,759,565
Cranes, hoists, and derricks, total			18,447,532			57,839,874
Crawler, total	14		1,959,026	29		6,625,698
Number reported		220	1,812,026		1,445	3,982,494
Number not reported			147,000			2,643,204

For footnotes, see end of table.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, BY NUMBER AND VALUE, FOR THE UNITED STATES: 1931 AND 1929—Continued

[All the figures for 1931 and a minor part of those for 1929 represent production, but the major part of the 1929 figures refer to manufacturers' sales (shipments or deliveries)]

KIND	1931			1929		
	Number of establishments reporting ¹	Number	Value	Number of establishments reporting ¹	Number	Value
Cranes, hoists, and derricks, total—Continued.						
Locomotive, total.....	12		\$1,832,856	13		\$5,953,216
Number reported.....		133	1,832,856		321	4,908,641
Number not reported.....						1,044,575
Overhead traveling, total.....	38		8,254,839	65		23,058,962
Number reported.....		3,324	7,378,623		13,661	20,124,516
Number not reported.....			876,216			2,934,447
Stationery.....	51		2,760,316			
Hoists and derricks reported separately.....	56		3,640,495	98		22,201,998
Dairy machinery, total.....			11,388,326			16,593,300
Cream separators.....	10	64,426	2,372,359	15		7,695,511
Milking-machine units.....	14	14,896	1,354,562	14		1,778,210
Bottling machinery for dairies.....	14		1,371,278			
Butter-making machines.....	9		853,598	49		7,119,579
Pasteurizers.....	21		2,253,330			
Other dairy machinery.....	44		3,183,199			
Dish-washing machines, total.....	15		1,983,526	13		3,424,028
Number reported.....		5,676	1,147,358		7,033	2,310,623
Number not reported.....			836,168			1,113,400
Dredging, excavating, and road-building machinery, total.....			57,192,780			91,438,554
Dredging machinery, total.....			3,520,498			3,641,599
Hydraulic.....	22		1,223,580	21		1,358,349
Other dredging machinery.....	5		2,296,918	12		2,283,250
Excavating machinery, total.....			26,666,542			57,103,248
Power shovels, total.....	43		18,608,791	44		43,348,094
Number reported.....		1,559	18,165,685		3,359	41,004,550
Number not reported.....			443,106			2,343,544
Drag lines and power scrapers, total.....	31	4,775	4,401,263	27		7,242,371
Number reported.....		4,775	4,401,263		1,706	4,235,628
Number not reported.....						3,006,743
Trench excavators, total.....	9	316	1,022,680	7		2,427,017
Number reported.....		316	1,022,680		247	1,673,062
Number not reported.....						764,015
Other excavating machinery.....	20		2,633,808	28		4,085,766
Road-building machinery, total.....			27,005,740			30,693,707
Road graders, total.....	36		9,640,744	37		15,754,483
Number reported.....		8,005	9,524,305		14,865	13,338,302
Number not reported.....			116,439			2,416,181
Road rollers, total.....	16		2,918,971	15		3,892,100
Number reported.....		787	2,542,892		1,090	3,426,116
Number not reported.....			376,079			465,984
Stone crushers.....	32		4,556,308	23		3,241,162
Other road-building machinery.....	90		9,889,717	72		7,805,962
Electrical machinery (generators, motors, and fans), total.....			138,424,786			285,974,236
Generators, self-contained power and lighting outfits, and synchronous condensers and frequency changers.....	56		28,430,685	59		67,535,202
Motor-generator sets and dynamotors.....	31		6,007,192	30		13,397,158
Motors and parts and supplies ¹	106		95,002,893	111		194,846,523
Electric fans (ceiling, column, and desk types).....	25		8,984,016	33		10,196,353

For footnotes, see end of table.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, BY NUMBER AND VALUE, FOR THE UNITED STATES: 1931 AND 1929—Continued

[All the figures for 1931 and a minor part of those for 1929 represent production, but the major part of the 1929 figures refer to manufacturers' sales (shipments or deliveries)]

KIND	1931			1929		
	Number of establishments reporting ¹	Number	Value	Number of establishments reporting ¹	Number	Value
Elevators and elevator machinery, total.....			\$20,034,847			\$44,044,399
Passenger, total.....	60		14,129,002	76		29,444,321
Number reported.....		3,314	13,961,256		6,287	22,699,514
Number not reported.....			167,746			6,744,807
Freight, total.....	104		5,905,845	79		14,600,078
Number reported.....		2,251	5,043,723		3,537	7,443,022
Number not reported.....			862,122			7,157,056
Engines (steam and internal-combustion), tractors, and water wheels.....	274		147,588,086	302		401,748,424
Flour-mill and grain-mill machinery.....	69		4,341,829	71		8,296,229
Foundry machinery, total.....			3,337,834			10,639,283
Molding machines, total.....	14		948,074	20		3,751,951
Number reported.....		802	770,366		3,558	2,188,464
Number not reported.....			177,708			1,563,487
Sand-blast machines.....	11		643,085	17	772	1,475,630
Tumbling barrels.....	11		109,096	6	663	457,242
Other foundry machinery, including that not reported as to kind.....	24		1,637,579	37		4,954,460
Gas regulators and governors.....	15	328,258	2,234,461	23		4,416,189
Glass-making machinery.....	19		2,544,812	24		3,688,331
Hat-making machinery.....	17		449,900	17		787,201
Hydraulic machinery (other than for dredging).....			4,539,543			10,061,728
Presses.....	33		1,193,653	67		10,061,728
Other than presses.....	32		3,345,890			
Incandescent-lamp-making machinery.....	10		2,627,354	13		3,091,623
Laundry machinery (for commercial laundries only).....	82		14,637,033	89		28,593,440
Lawn mowers, total.....			6,140,897			10,852,853
Hand.....	23	724,423	4,198,865	25	1,265,831	8,432,168
Power and other.....	12	13,223	1,942,032	11	16,527	2,520,785
Leather-working machinery (other than shoe machinery).....	22		815,717	32		1,249,061
Locomotives, other than electric, ¹ total.....			13,072,943			65,203,359
Internal-combustion.....	9		724,112	9	700	2,398,252
Steam.....	14	179	12,348,831	15	995	62,805,107
Machine tools.....	419		58,712,279	425		1,186,373,954
Manifolding machines (mimeographs, multigraphs, etc.).....	16		2,998,427	11		3,458,745
Metal-working machinery other than machine tools, total.....			36,294,221			50,335,753
Rolling-mill machinery.....	38		17,567,791	38		19,617,419
Sheet-metal-working machinery, total.....			13,580,271			23,138,737
Can-making machinery.....	16		9,854,113			
Other sheet-metal-working machinery.....	23		3,726,158	59		23,138,737
Wire-drawing machines.....	10		411,062	19		1,619,482
Rod-working and wire-working machinery.....	41		1,887,847	33		4,076,530
Other metal-working machinery.....	33		2,847,250	27		1,883,285
Meters (gas, water, and other liquid), total.....			14,393,138			25,694,279
Gas.....	14	479,032	4,958,322	19	1,310,574	12,402,071
Water and other liquid.....	38		8,874,447	35	768,874	12,733,221
Gas and liquid meters not separately reported by manufacturers.....	4		560,309	3		558,967

For footnotes, see end of table.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, BY NUMBER AND VALUE, FOR THE UNITED STATES: 1931 AND 1929—Continued

[All the figures for 1931 and a minor part of those for 1929 represent production, but the major part of the 1929 figures refer to manufacturers' sales (shipments or deliveries)]

KIND	1931			1929		
	Number of establishments reporting ¹	Number	Value	Number of establishments reporting ¹	Number	Value
Mining machinery (not including oil-well machinery).....	114	-----	\$12, 570, 454	130	-----	\$40, 325, 223
Motorcycles and parts and bicycles, total.....	-----	-----	10, 608, 289	-----	-----	16, 019, 284
Motorcycles, motorcycle side cars, and motorcycle parts ¹	8	-----	5, 875, 035	10	-----	10, 735, 611
Bicycles.....	7	260, 029	4, 733, 254	7	307, 845	6, 183, 773
Motor vehicles except motorcycles, total.....	-----	2, 295, 598	1, 387, 516, 711	-----	5, 204, 087	3, 412, 055, 752
Passenger vehicles (including public conveyances).....	99	1, 921, 435	1, 146, 091, 195	111	4, 388, 315	2, 825, 700, 408
Commercial vehicles.....	127	245, 735	164, 100, 693	141	391, 593	277, 352, 017
Government (Federal, State, county, and municipal) vehicles.....	50	1, 215	6, 163, 290	28	1, 900	10, 156, 108
Chassis (passenger, commercial, and bus).....	91	127, 213	71, 161, 533	112	512, 219	298, 847, 221
Oil-mill machinery.....	15	-----	1, 286, 044	18	-----	2, 532, 508
Oil-refinery machinery.....	34	-----	7, 911, 908	38	-----	30, 210, 068
Oil-well machinery.....	192	-----	23, 105, 131	187	-----	89, 007, 149
Packaging machines.....	38	-----	6, 953, 676	31	-----	5, 757, 061
Packing-house machinery, total.....	-----	-----	4, 621, 927	-----	-----	6, 062, 706
Meat-packing.....	16	-----	1, 914, 317	21	-----	4, 508, 727
Other packing-house machinery.....	32	-----	2, 707, 010	20	-----	2, 153, 970
Paint-making machinery.....	15	-----	481, 434	19	-----	904, 687
Paper-box machines, total.....	35	-----	2, 905, 900	35	-----	4, 552, 854
Number reported.....	-----	508	1, 610, 426	-----	1, 736	3, 749, 300
Number not reported.....	-----	-----	1, 295, 474	-----	-----	803, 554
Paper-mill and pulp-mill machinery.....	108	-----	15, 793, 422	112	-----	30, 456, 020
Pharmaceutical machinery.....	9	-----	1, 222, 929	7	-----	1, 274, 344
Photo-engraving machinery.....	11	-----	776, 847	6	-----	1, 847, 212
Pneumatic machinery (not including pneumatic tools), total.....	-----	-----	16, 866, 729	-----	-----	41, 374, 404
Air compressors, total.....	87	-----	15, 210, 065	69	-----	39, 683, 106
Number reported.....	-----	41, 481	12, 771, 457	-----	60, 004	33, 225, 958
Number not reported.....	-----	-----	2, 438, 608	-----	-----	6, 457, 151
Other pneumatic machinery.....	17	-----	1, 656, 664	23	-----	1, 691, 295
Printers' machinery, total.....	-----	-----	32, 323, 845	-----	-----	64, 859, 911
Presses, total.....	-----	-----	15, 548, 640	-----	-----	36, 051, 750
Cylinder (flat-bed).....	11	995	3, 789, 933	20	2, 220	10, 547, 914
Rotary, total.....	22	-----	4, 087, 043	22	-----	9, 304, 233
Number reported.....	-----	221	3, 891, 692	-----	2, 191	7, 007, 917
Number not reported.....	-----	-----	195, 351	-----	-----	2, 286, 316
Web.....	10	307	5, 531, 507	14	443	7, 002, 853
Other presses.....	31	-----	2, 140, 166	38	-----	9, 196, 750
Typesetting machines.....	8	-----	12, 443, 835	7	-----	18, 750, 283
Other printers' machinery.....	60	-----	4, 331, 361	47	-----	10, 057, 928
Pumps and pumping equipment.....	481	-----	72, 025, 798	496	-----	132, 747, 407
Refrigerators, mechanical, total.....	-----	-----	141, 189, 267	41	-----	136, 040, 508
Domestic:	-----	-----	-----	-----	-----	-----
Systems complete with cabinets.....	33	815, 994	102, 361, 313	-----	-----	-----
Systems complete without cabinets.....	16	126, 948	10, 195, 679	-----	-----	-----
Commercial refrigerating machines:	-----	-----	-----	-----	-----	-----
Water coolers.....	16	22, 638	2, 518, 617	41	-----	136, 040, 508
Ice-cream cabinets.....	13	52, 500	10, 095, 843	-----	-----	-----
Other.....	14	-----	2, 593, 646	-----	-----	-----
Evaporators and compressors for sale separately.....	13	-----	12, 824, 169	-----	-----	-----

For footnotes, see end of table.

TABLE 1.—MACHINERY—PRODUCTION OF PRINCIPAL CLASSES, BY NUMBER AND VALUE, FOR THE UNITED STATES: 1931 AND 1929—Continued

[All the figures for 1931 and a minor part of those for 1929 represent production, but the major part of the 1929 figures refer to manufacturers' sales (shipments or deliveries)]

KIND	1931			1929		
	Number of establishments reporting ¹	Number	Value	Number of establishments reporting ¹	Number	Value
Refrigerating and ice-making machinery, other than mechanical refrigerators.....	52	-----	\$10,641,591	58	-----	\$43,267,291
Rubber-working machinery.....	47	-----	4,424,903	55	-----	13,551,792
Scales and balances.....	49	-----	12,072,174	66	-----	25,385,186
Sewing machines, total.....	-----	298,610	15,252,407	-----	793,748	37,378,210
Household types, total.....	-----	231,569	7,621,755	-----	669,027	25,095,008
Electric.....	5	166,216	6,129,440	8	323,474	16,481,823
Foot and hand.....	4	65,353	1,492,315	5	345,553	8,613,185
Industrial types.....	18	67,041	7,630,652	18	122,641	12,001,736
Sewing machines not reported by type.....	-----	-----	-----	-----	2,080	281,466
Shoe machinery.....	42	-----	9,755,435	37	-----	12,317,414
Stokers, mechanical, total.....	-----	-----	8,309,543	-----	-----	14,053,940
Industrial, total.....	55	-----	7,293,844	43	-----	12,938,303
Number reported.....	-----	5,133	6,440,734	-----	8,838	11,956,105
Number not reported.....	-----	-----	847,110	-----	-----	982,198
Domestic.....	27	4,997	1,015,699	13	7,081	1,115,637
Stone-working machinery.....	28	-----	1,327,298	22	-----	2,184,825
Sugar-mill machinery.....	32	-----	1,840,163	30	-----	5,045,932
Textile machinery and parts.....	358	-----	61,222,936	393	-----	115,525,123
Tobacco, cigar, and cigarette machinery.....	10	-----	3,476,033	11	-----	5,017,807
Transmission machinery.....	83	-----	15,326,370	79	-----	26,785,759
Vacuum cleaners (electric).....	25	-----	24,847,203	26	1,407,224	35,107,606
Vending machines.....	54	-----	5,860,568	44	-----	8,821,261
Washing machines, clothes wringers, driers, and ironing machines for household use, total.....	-----	-----	48,281,404	-----	-----	79,010,823
Washing machines.....	60	-----	43,346,931	67	-----	71,388,144
Ironing machines.....	21	-----	2,794,338	16	-----	4,015,222
Wringers, driers, and extractors.....	11	-----	2,140,135	10	-----	3,607,457
Welding machines and apparatus, total.....	-----	-----	7,912,997	-----	-----	² 12,402,798
Acetylene.....	20	-----	3,887,054	24	-----	2,964,135
Electric.....	28	-----	4,025,943	25	-----	9,438,663
Well-drilling machinery (other than oil-well machinery).....	18	-----	1,529,972	18	-----	1,463,018
Windmills.....	20	35,947	1,213,904	33	96,474	4,063,411
Wood-working machinery.....	233	-----	11,056,696	265	-----	35,150,807
Other machinery, not reported by kind.....	734	-----	57,742,487	862	-----	158,701,165

¹ The differences between the numbers of establishments engaged in manufacturing certain kinds of machines, as given in this column, and the numbers of establishments classified in the industries which manufacture these machines as primary products, as given in the reports for those industries, are due to the inclusion in the numbers given in this column, but not in the numbers of establishments classified in the respective industries, of data for establishments which manufacture the specified kinds of machines as secondary products. The total numbers of establishments engaged in the manufacture of certain classes or groups of products (such as agricultural implements) are not given, for the reason that, as many establishments manufacture more than one of the kinds of products entering into the total for the class or group, the net total is smaller than the sum of the numbers reporting the several kinds of products.

² Revised.

³ Combined to avoid disclosing approximations of production reported by individual establishments.

⁴ Included in figures for "Other machinery, not reported by kind."

⁵ Not reported separately. The total value of industrial cars and trucks, motorized and hand, as reported for 1929, was \$17,918,881.

⁶ The figures for electric locomotives are withheld to avoid disclosing approximations of the data reported by individual establishments.

TABLE 2.—MACHINERY—VALUE OF PRODUCTION OF SELECTED CLASSES, FOR SELECTED STATES: 1931

[This table gives statistics for each State which reported products of the specified kind to the value of at least \$250,000, except in cases where it is necessary to withhold the figures to avoid disclosing, exactly or approximately, the values reported by individual establishments]

KIND AND STATE	Value	KIND AND STATE	Value
Addressing and mailing machines, total.....	\$6, 156, 363	Check-writing machines, total.....	\$1, 316, 032
New York.....	336, 013	Illinois.....	443, 045
Air compressors, total.....	15, 210, 065	New York.....	759, 817
California.....	370, 336	Clay-working machinery (brick, pottery, etc.), total.....	1, 670, 504
Illinois.....	1, 079, 886	Ohio.....	921, 143
Michigan.....	314, 610	Pennsylvania.....	383, 399
New York.....	4, 355, 738	Condensers, total.....	2, 590, 296
Ohio.....	2, 193, 350	Pennsylvania.....	957, 257
Pennsylvania.....	3, 181, 105	Confectionery and ice-cream machinery, total.....	3, 809, 334
Wisconsin.....	463, 740	Illinois.....	693, 067
Bakers' machinery and equipment, total.....	10, 875, 830	New York.....	369, 373
Bake ovens, total.....	3, 224, 040	Ohio.....	260, 960
Illinois.....	459, 446	Pennsylvania.....	557, 962
Other bakers' machinery and equipment, total.....	7, 651, 790	Conveying and elevating machinery, total.....	22, 108, 704
Illinois.....	1, 126, 482	Belt type, total.....	7, 152, 502
New York.....	443, 251	California.....	393, 941
Ohio.....	1, 886, 388	Illinois.....	1, 099, 350
Pennsylvania.....	903, 083	New Jersey.....	1, 344, 593
Blowers and exhaust and ventilating fans, total.....	15, 322, 692	New York.....	441, 744
Blowers, total.....	4, 630, 948	Ohio.....	2, 168, 067
Illinois.....	341, 044	Pennsylvania.....	379, 564
Pennsylvania.....	449, 713	Bucket type, total.....	2, 695, 480
Fans, 16-inch and under, total.....	1, 523, 992	Illinois.....	599, 584
Ohio.....	439, 356	Pennsylvania.....	820, 263
Fans, over 16-inch, total.....	7, 406, 497	Gravity.....	1, 759, 033
New York.....	1, 033, 992	Pneumatic.....	1, 106, 049
Blowers and fans not reported by kind.....	1, 761, 255	Other conveying and elevating machinery, total.....	7, 921, 674
Bookbinding machinery, total.....	2, 840, 358	Illinois.....	3, 617, 667
Illinois.....	277, 498	Michigan.....	704, 614
New York.....	250, 319	New York.....	558, 916
Bottlers' machinery (except for dairies), total.....	5, 653, 012	Ohio.....	533, 227
Illinois.....	1, 370, 136	Pennsylvania.....	895, 461
Maryland.....	1, 054, 582	Conveying and elevating machinery not reported as to type.....	1, 473, 907
Ohio.....	899, 413	Cotton-ginning machinery, total.....	2, 630, 353
Bottling machinery for dairies, total.....	1, 371, 278	Georgia.....	582, 135
Wisconsin.....	1, 078, 622	Texas.....	770, 838
Canning machinery, total.....	4, 064, 515	Cranes:	
California.....	925, 839	Crawler, total.....	1, 959, 026
Illinois.....	658, 076	Ohio.....	630, 020
New York.....	746, 519	Locomotive, total.....	1, 832, 856
Ohio.....	265, 387	Ohio.....	715, 236
Wisconsin.....	446, 846	Overhead traveling, total.....	8, 254, 839
Cars and trucks, industrial, motorized, total.....	2, 816, 591	Ohio.....	3, 175, 433
Ohio.....	1, 786, 624	Pennsylvania.....	1, 319, 900
Pennsylvania.....	445, 366	Stationary, total.....	2, 760, 316
Cement-making machinery, total.....	1, 579, 346	Pennsylvania.....	342, 333
Pennsylvania.....	695, 297	Excavating machinery, total.....	26, 666, 542
Cement and concrete-block machines, total.....	416, 823	Power shovels, total.....	18, 608, 791
Michigan.....	282, 932	Ohio.....	6, 634, 752
		Wisconsin.....	6, 368, 583
		Drag lines and power scrapers, total.....	4, 401, 263
		Illinois.....	2, 314, 322
		Ohio.....	516, 731
		Trench excavators, total.....	1, 022, 680
		Ohio.....	504, 470
		Other excavating machinery, total.....	2, 633, 808
		Illinois.....	267, 890

TABLE 2.—MACHINERY—VALUE OF PRODUCTION OF SELECTED CLASSES, FOR SELECTED STATES: 1931—Continued

[See note at head of table]

KIND AND STATE	Value	KIND AND STATE	Value
Road-building machinery, total.....	\$27,005,740	Mining machinery (not including oil-well machinery), total.....	\$12,570,454
Road graders.....	9,640,744	California.....	859,664
Road rollers, total.....	2,918,971	Colorado.....	1,049,342
Ohio.....	2,275,845	Illinois.....	648,318
Stone crushers, total.....	4,666,308	Indiana.....	261,999
Pennsylvania.....	1,122,441	Iowa.....	256,905
Wisconsin.....	2,033,882	Pennsylvania.....	1,351,161
Other road-building machinery, total.....	9,889,717	Molding machines, total.....	948,074
California.....	874,477	Illinois.....	258,759
Illinois.....	1,873,841	Oil-mill machinery (cottonseed and other), total.....	1,286,044
Massachusetts.....	819,278	Ohio.....	801,595
New York.....	561,966	Oil-refinery machinery, total.....	7,911,908
Ohio.....	1,773,682	California.....	1,698,951
Wisconsin.....	1,365,839	Illinois.....	365,045
Elevators and elevating machinery, total.....	20,034,847	New York.....	2,749,460
Passenger, total.....	14,129,002	Pennsylvania.....	298,808
California.....	738,010	Oil-well machinery, total.....	23,105,131
Illinois.....	2,312,811	California.....	5,544,133
Ohio.....	1,281,478	Kansas.....	919,290
Pennsylvania.....	578,228	Ohio.....	1,451,720
Freight, total.....	5,905,845	Oklahoma.....	1,317,963
Illinois.....	1,289,579	Pennsylvania.....	2,303,551
Massachusetts.....	294,698	Texas.....	6,950,718
New Jersey.....	278,794	Packaging machines, total.....	6,953,676
Ohio.....	687,861	Illinois.....	1,117,142
Pennsylvania.....	305,610	Michigan.....	1,011,853
Flour-mill and grain-mill machinery, total.....	4,341,820	New York.....	1,487,274
Illinois.....	443,306	Packing-house machinery, other than meat-packing, total.....	2,707,610
Minnesota.....	775,899	California.....	1,343,939
New York.....	400,996	New York.....	355,969
Ohio.....	351,740	Paper-box machinery, total.....	2,905,900
Pennsylvania.....	903,074	New York.....	1,042,728
Glass-making machinery, total.....	2,544,812	Pennsylvania.....	458,487
Ohio.....	1,577,299	Paper-mill and pulp-mill machinery, total.....	15,793,422
Incandescent lamp making machinery, total.....	2,627,354	Massachusetts.....	4,096,921
New Jersey.....	759,194	New Jersey.....	411,546
Laundry machinery (for commercial laundries), total.....	14,637,033	New York.....	1,513,136
Illinois.....	3,831,046	Ohio.....	1,867,581
Massachusetts.....	390,453	Oregon.....	437,960
New York.....	4,488,195	Printers' machinery, total.....	32,323,845
Lawn mowers (hand), total.....	4,198,865	Presses, total.....	15,548,649
Indiana.....	2,076,650	Illinois.....	3,977,484
Leather-working machinery (other than shoe machinery), total.....	815,717	Michigan.....	2,068,477
Massachusetts.....	419,926	New Jersey.....	2,268,204
Metal-working machinery, total.....	36,294,221	Typesetting machines.....	12,443,835
Rod-working and wire-working machinery, total.....	1,887,847	Other printers' machinery, total.....	4,331,361
Connecticut.....	319,813	Illinois.....	306,440
Rolling-mill machinery, total.....	17,567,791	New Jersey.....	1,332,018
Pennsylvania.....	11,711,892	New York.....	1,161,602
Sheet-metal-working machinery, total.....	13,580,271	Pennsylvania.....	418,587
Can-making machinery, total.....	9,854,113	Rubber-working machinery, total.....	4,424,903
Illinois.....	2,124,965	New Jersey.....	385,005
New York.....	2,040,234	Ohio.....	2,652,239
Other sheet-metal-working machinery, total.....	3,726,158	Shoe machinery, total.....	9,755,435
Ohio.....	509,074	Massachusetts.....	7,093,585
Wire-drawing machines.....	411,062	Missouri.....	2,009,366
Other metal-working machinery, total.....	2,847,250	Stokers, mechanical, industrial, total.....	7,293,844
Ohio.....	1,102,160	Illinois.....	662,871
		Michigan.....	1,515,718
		Ohio.....	1,037,496
		Pennsylvania.....	2,423,240

TABLE 2.—MACHINERY—VALUE OF PRODUCTION OF SELECTED CLASSES, FOR SELECTED STATES: 1931—Continued

[See note at head of table]

KIND AND STATE	Value	KIND AND STATE	Value
Stone-working machinery, total.....	\$1,327,298	Transmission machinery, total—Con.	
Vermont.....	685,264	Pennsylvania.....	\$1,528,169
Sugar-mill machinery, total.....	1,840,163	Wisconsin.....	3,294,987
New York.....	337,477	Vending machines, total.....	5,860,559
Ohio.....	449,471	Illinois.....	4,030,882
Textile machinery and parts, total.....	61,222,936	New York.....	667,021
Connecticut.....	1,538,611	Ohio.....	386,150
Georgia.....	645,140	Welding machines and apparatus, acet-	
Illinois.....	1,140,554	ylene, total.....	3,887,054
Massachusetts.....	21,706,168	California.....	278,866
New Hampshire.....	3,874,481	Illinois.....	381,805
New Jersey.....	3,478,773	Wood-working machinery, total.....	11,656,696
New York.....	931,556	Illinois.....	1,268,108
North Carolina.....	866,545	Indiana.....	350,559
Pennsylvania.....	14,916,419	Massachusetts.....	742,350
Rhode Island.....	8,582,959	Michigan.....	1,079,931
South Carolina.....	640,183	New Jersey.....	1,457,904
Transmission machinery, total.....	15,326,370	New York.....	772,015
California.....	379,790	Ohio.....	1,172,032
Illinois.....	1,865,109	Pennsylvania.....	1,172,748
Indiana.....	3,870,415	Washington.....	332,778
New York.....	1,668,404	Wisconsin.....	1,577,841
Ohio.....	913,844		

AGRICULTURAL IMPLEMENTS; MANUFACTURE AND SALE OF FARM EQUIPMENT AND RELATED PRODUCTS

INTRODUCTION

The statistics in this section are shown under two heads, namely, "Agricultural Implements" (pp. 940 and 941) and "Manufacture and Sale of Farm Equipment and Related Products" (pp. 942-953). The former refers to the manufacturing industry classified by the Census Bureau under that designation, which embraces only those establishments whose principal products fall into certain specified classes. (See "Description of the industry," p. 940.) The total value of products shown for this industry (see Table 1, p. 940) includes the value of various minor or secondary products other than agricultural implements, but does not include the value of agricultural implements made by establishments engaged primarily in the manufacture of other classes of products. (See sec. 11, p. 7; also "Primary and secondary products," p. 9.)

The farm-equipment statistics, however, cover not only the machines and implements which constitute the principal products of establishments in the Agricultural Implements industry, but also the output of the same classes of machines and implements made as secondary products by establishments engaged primarily in other industries. They also cover certain classes of machinery, implements, tools, etc., not treated by the Census Bureau as products of the Agricultural Implements industry, namely, tractors, horse-drawn vehicles, and some of the items in the "Barn and barnyard equipment" and "Miscellaneous" groups. (See Tables 12 and 13, p. 952.)

Thus the products of the Agricultural Implements industry fall into two broad classes, namely, (1) machines and implements used exclusively or almost exclusively on the farm (not including farm tractors and some of the products in the "Barn and barnyard equipment" and "Miscellaneous" groups) and (2) a minor and relatively unimportant group of miscellaneous commodities made as secondary products and intended for use mainly elsewhere than on the farm; whereas "farm equipment," as the term is used in this report, comprises Class 1 of the products reported for the Agricultural Implements industry (together with similar products made outside the industry), and in addition farm tractors, some of the "Barn and barnyard equipment" and "Miscellaneous" products, and certain classes of equipment used both on the farm and elsewhere—for example, horse-drawn vehicles, water pumps, and windmills. (See "Equipment for use elsewhere than on farms," p. 942.)

Summary and wage-earner statistics only are given for the Agricultural Implements industry. The statistics for farm equipment, on the other hand, relate only to the numbers and values of specified classes and kinds of products and the numbers of establishments reporting them (either as major or as minor products).

AGRICULTURAL IMPLEMENTS

Description of the industry.—This industry embraces establishments engaged primarily in the manufacture of products falling into the following classes: (1) Plows and listers; (2) harrows, rollers, pulverizers, and stalk cutters; (3) planting and fertilizing machines; (4) cultivators and weeders; (5) harvesting machines; (6) haying implements; (7) machines for preparing crops for market or for use; (8) miscellaneous agricultural implements, such as dairy machinery, seed-potato cutters, hay carriers (forks and slings), etc. No detailed statistics of products are given in this report, but such statistics are included in the census report on the manufacture and sale of farm equipment in 1931, published separately. (That report, which is one of an annual series, also gives production and sales statistics for certain classes of farm equipment, such as tractors, which are not treated as products of the Agricultural Implements industry.)

TABLE I.—SUMMARY FOR THE UNITED STATES, 1899–1931, AND FOR STATES, 1931

[Data for establishments with products under \$5,000 in value are included for 1919 and prior years but not for 1921 and subsequent years. See sec. 3d, p. 4. Statistics are given for all States for which separate figures can be published without disclosing, exactly or approximately, the data reported by individual establishments. Certain of the "Other States," however, are more important in the industry than some of the States shown separately]

	Number of estab- lish- ments	Wage earners (average for the year)	Wages	Cost of ma- terials, fuel, and pur- chased elec- tric energy	Value of products	Value added by manu- facture ¹
<i>United States</i>						
1931.....	219	17,529	\$19,106,105	\$32,243,922	\$84,287,508	\$52,043,586
1929.....	293	41,663	53,941,939	113,969,484	277,854,462	163,884,978
1927.....	277	33,346	46,415,459	85,666,186	202,732,126	117,065,940
1925.....	303	28,696	37,387,620	73,850,060	169,467,968	95,617,906
1923.....	312	30,962	40,510,534	63,491,886	151,286,248	87,794,262
1921.....	353	30,359	39,835,414	87,267,274	163,816,679	76,549,405
1919.....	521	54,368	66,704,434	144,571,943	304,961,265	160,389,322
1914.....	601	48,459	34,593,325	73,508,645	164,086,835	90,578,190
1909.....	640	50,551	28,608,615	60,306,519	140,329,268	88,022,749
1904.....	648	47,394	25,002,650	48,281,406	112,007,344	63,725,938
1899.....	716	46,582	22,450,880	43,944,628	101,207,428	57,232,800
Percent of increase or de- crease (—):						
1929–31.....	–25.3	–57.9	–67.6	–71.7	–69.7	–68.2
1927–29.....	5.8	24.9	27.0	33.0	37.1	40.0
1925–27.....	–8.6	16.2	24.1*	16.0	19.6	22.4
1923–25.....	–2.9	–7.3	–7.7	16.3	12.0	8.9
1921–23.....	–11.6	2.0	1.7	–27.2	–7.6	14.7
1919–21.....	–32.2	–44.2	–40.3	–39.6	–46.3	–52.3
1921–31.....	–38.0	–42.3	–52.0	–63.1	–48.5	–32.0
1919–29.....	–43.8	–23.4	–11.6	–21.2	–8.9	2.2
1909–19.....	–18.6	7.6	133.2	139.7	108.4	86.4
1899–1909.....	–10.5	8.5	27.4	37.2	44.6	50.2
<i>States, 1931</i>						
California.....	13	154	\$204,434	\$394,986	\$1,129,005	\$734,019
Colorado.....	3	7	10,697	26,409	64,650	38,241
Illinois.....	38	9,841	11,331,991	16,833,438	44,731,501	27,895,063
Indiana.....	14	1,259	1,367,211	1,628,921	4,707,103	3,078,182
Iowa.....	18	258	281,442	722,795	1,691,580	968,765
Kansas.....	5	31	34,277	67,094	166,598	106,414

Footnotes at end of table.

TABLE 1.—SUMMARY FOR THE UNITED STATES, 1899-1931, AND FOR STATES, 1931—Continued

[See note at head of table]

	Number of establishments	Wage earners (average for the year)	Wages	Cost of materials, fuel, and purchased electric energy	Value of products	Value added by manu- facture ¹
<i>States, 1931—Continued</i>						
Maine.....	3	95	\$106,160	\$103,212	\$314,809	\$211,597
Nebraska.....	4	73	78,250	132,922	387,501	254,579
New Jersey.....	3	3	2,376	9,044	23,683	14,639
New York.....	18	1,321	1,329,902	2,144,519	6,214,755	4,070,236
North Carolina.....	8	132	128,621	135,308	392,254	256,946
Ohio.....	12	658	745,049	1,476,921	4,162,832	2,686,911
Pennsylvania.....	9	468	464,957	889,910	2,253,222	1,363,312
Virginia.....	9	112	103,926	114,525	353,362	268,837
Washington.....	3	20	22,356	80,449	150,138	69,689
Wisconsin.....	15	854	918,707	1,299,409	3,780,485	2,481,076
Other States ²	44	2,243	1,975,749	6,195,060	13,734,140	7,539,080

¹ Value of products less cost of materials, fuel, and purchased electric energy. See sec. 20, p. 11.

² Connecticut, 2 establishments; Florida, 2; Georgia, 5; Idaho, 1; Kentucky, 2; Louisiana, 1; Massachusetts, 2; Michigan, 10; Minnesota, 10; Missouri, 2; South Carolina, 1; Tennessee, 3; Texas, 2; Vermont, 1.

TABLE 2.—WAGE EARNERS, BY MONTHS, FOR THE UNITED STATES, 1931, 1929, 1925, 1919, 1914, AND 1909, AND FOR STATES, 1931

[This table presents statistics for only those States for which figures can be given without disclosing, exactly or approximately, data for individual establishments. The sum of the State items in any column is not, therefore, equal to the United States total at the head of the column. The month of maximum employment is indicated by bold-faced figures and that of minimum employment by *italic* figures. See sec. 13, p. 8]

	Average number em- ployed during year	NUMBER REPORTED FOR—											
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<i>United States</i>													
1931.....	17,529	23,585	23,624	22,888	20,199	17,121	14,072	13,574	12,789	11,623	14,866	16,792	19,207
1929.....	41,663	42,641	44,308	45,078	45,055	44,721	43,618	41,132	38,637	37,240	37,605	39,482	40,448
1925.....	28,696	28,636	30,038	30,778	30,426	29,406	28,459	26,829	26,903	27,029	27,484	28,777	29,882
1919.....	54,368	57,926	59,748	58,653	55,771	53,994	52,817	52,900	49,483	51,256	51,059	52,610	56,199
1914.....	48,459	61,746	61,900	58,143	54,305	49,904	46,990	45,169	37,340	35,208	39,536	44,219	47,048
1909.....	50,551	51,540	53,673	54,759	53,165	50,990	48,727	45,027	44,006	46,484	49,477	52,410	55,465
<i>States, 1931</i>													
California.....	154	188	192	191	186	192	169	142	133	126	97	117	110
Colorado.....	7	14	12	10	7	6	6	6	6	5	3	5	3
Illinois.....	9,841	13,391	13,459	12,746	11,455	9,389	7,286	7,149	6,905	5,900	8,368	10,242	11,802
Indiana.....	1,259	1,675	1,578	1,765	1,347	1,064	799	950	910	985	1,243	1,253	1,542
Iowa.....	258	325	335	337	372	346	357	179	121	114	114	226	270
Kansas.....	31	29	31	32	30	32	31	25	25	32	35	32	33
Maine.....	95	103	104	103	92	89	85	93	80	88	106	100	100
Nebraska.....	73	107	115	96	85	73	67	67	64	57	61	41	40
New Jersey.....	3	5	6	5	6	4	4	3	3	1	1	3	2
New York.....	1,321	1,767	1,796	1,832	1,672	1,419	1,170	1,018	804	707	1,023	1,087	1,557
North Carolina.....	132	104	116	121	119	114	153	154	132	139	154	139	138
Ohio.....	658	793	825	882	791	712	674	654	581	582	436	444	465
Pennsylvania.....	468	486	472	474	482	466	478	481	480	470	465	454	414
Virginia.....	112	122	123	123	115	110	80	79	89	121	129	132	124
Washington.....	20	19	22	29	32	22	24	25	16	13	15	13	18
Wisconsin.....	854	1,065	1,187	1,174	1,083	946	821	675	611	591	613	706	781